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Lemelin, Dario

De:

Lemire, Maryse

Envoyé:

4 octobre 2018 13:30

À:

Gros-Louis, Denis

Cc:

Lemelin, Dario; Rivierre, Antoine

Objet:

TR: Seal Management

Pièces jointes:

MECTS-#3955151-v11-2019

_Atlantic_Seal_Management___Memo_to_the_Minister_....DOCX; MECTS-#3965289-v2-TAB_1)_Overview_of_the_Atlantic_Seal_Harvest_with_Map.DOCX; MECTS-#3907697-v1-

FHM-ADM_approval_-Apr_26_-2018-009-00223.TIF

Importance:

Haute

Indicateur de suivi:

Répondre

Échéance avant le:

5 octobre 2018 09:00

État de l'indicateur:

Avec indicateur

Pour action: Si vous avez des notes à ajouter

Délai: demain matin 9 h maximum

Marylène Gauthier

Adjointe exécutive, Direction régionale de la gestion des pêches Pêches et Océans Canada / Gouvernement du Canada marylene.gauthier@dfo-mpo.gc.ca / Tél.: 418 648-5783

Executive Assistant, Fisheries Management Regional Directorate Fisheries and Oceans Canada / Government of Canada marylène.gauthier@dfo-mpo.gc.ca / Tel.: 418 648-5783

De: Burns, Adam

Envoyé: 4 octobre 2018 12:49

À: Laverdure, Louise <Louise.Laverdure@dfo-mpo.gc.ca>; Lambert, Robert <Robert.Lambert@dfo-mpo.gc.ca>; Lemire, Maryse <Maryse.Lemire@dfo-mpo.gc.ca>; LeCouffe, Marc <Marc.LeCouffe@dfo-mpo.gc.ca>; Daley, Annette <Annette.Daley@dfo-mpo.gc.ca>

Cc: D'Aoust, Courtney < Courtney. D'aoust@dfo-mpo.gc.ca>; Lester, Brian < Brian. Lester@dfo-mpo.gc.ca>; Whorley, David < David. Whorley@dfo-mpo.gc.ca>

Objet: Seal Management

Importance : Haute

Hi,

The attached information memo will be going up to DMO COB tomorrow. It is meant to set the stage in advance of the seal advisory meetings in a couple of weeks.

Please let me know if you have any input, from a "disaster check" perspective, by 10AM Ottawa time tomorrow.

Happy Thanksgiving.

ΑB

No information has been removed or severed from this page



Fisheries and Oceans Canada Pêches et Océans Canada

Deputy Minister

Sous-ministre

UNCLASSIFIED

2018-FHM-00318 EKME #: 3955151

MEMORANDUM FOR THE MINISTER

2019 ATLANTIC SEAL MANAGEMENT (FOR INFORMATION)

SUMMARY OF ADVICE TO MINISTER

The purpose of this note is to inform you of the upcoming October 17 industry consultations at the Atlantic Seal Advisory Committee (ASAC). Seals are harvested in Newfoundland, Maritimes, Quebec and Gulf regions (see TAB 1 which includes a map of seal fishing areas).

Key points for discussion will be Total Allowable Catch (TAC) levels for the 2019 fishery, and industry's request to lift the freeze on commercial harp seal licences in order to achieve increased capacity in the fishery.

In the absence of new harp seal science advice, discussions on TAC levels will be limited to a variety of potential population scenarios. Further background with respect to the licensing freeze is provided in TAB 2.

A memorandum for decision with recommendation for 2019 TAC levels and options related to the licence freeze emerging from the October 17 consultations will follow under separate cover.

BACKGROUND

The commercial harvest of Northwest Atlantic harp and grey seals occurs between March and May in Atlantic Canada and Quebec. The number of animals harvested remains well within sustainable levels; recent landings represent a small fraction of previous TAC levels. An overview of the seal fishery is provided at TAB 1. A TAC was not set for Atlantic seals in 2017 or 2018, although the fishery was closely monitored.

In 2004, the Department implemented a freeze on the issuance of new commercial harp seal licences (grey seal licences are still available). The purpose of the freeze was to allow for professionalization of the fishery, including mandatory humane harvesting training for sealers (achieved in 2016) at a time when activity in the seal fishery was high. The freeze applies to both categories of commercial harp seal licences: assistant and professional. The freeze has prevented



both assistant sealers from upgrading to the professional category, and the entry of new commercial licence holders.

The Department has received formal requests from Quebec and Newfoundland and Labrador industry representatives to lift the freeze. The requests are driven in part by an aging population of professionally licensed harvesters who must continue to supervise assistants, and by the desire to grow the fishery.

A memorandum prepared for Minister LeBlanc provides further information on the licensing freeze at TAB 2.

On October 17th the Department will undertake consultations on management of Atlantic seals at the ASAC meeting, the primary consultative body for the seal fishery. The harp seal licence freeze and TAC levels for 2019 will be the two main issues for discussion. The Grey Seal Working Group will meet as a separate entity the day prior to ASAC, for discussion on specific regulatory, policy and management changes to advance the grey seal industry. The outcomes of this working group meeting will be summarized at ASAC.

STRATEGIC CONSIDERATIONS

The number of commercial licence holders in Atlantic Canada and Quebec has declined significantly, falling from about 13,000 in 2009 to 5,600 in 2017. Participation in the seal fishery is also low; approximately 600 licence holders actively participated in 2017.

The large number of inactive licences among total licence holders is explained by a number of factors: 1) holding licences in anticipation of the potential for a future DFO licence retirement plan; 2) holding licences in the hope of increased market demand for seal products; 3) strongly valuing licence holding in personal/traditional cultural terms. Since sealing licences are inexpensive, the choice to retain but not use them is a low-cost decision.

Some aging professional-category licence holders renew their licence and nominally participate in the hunt for the sole reason of enabling assistants to participate, as required under the licensing regime. It is suggested that movement on the freeze might enable older professional sealers to retire if upgrades were permitted for assistants to become professional sealers.

The Department will seek to understand the level of increased harvesting capacity desired by industry, although representatives for harvesters in Quebec and Newfoundland and Labrador are likely to support any increase in the number of professional sealers. This must be balanced with market demand and public reaction to an increase in the number of harvesters.

Discussions of TAC will likely be contentious. Despite catches well below the previously announced TAC level, industry views the grey seal biomass as abundant and predatory on groundfish, and so is not supportive of reducing the TAC to 34,500 animals in line with 2016 science advice. For harp seals, TAC discussion will be limited to possible scenarios in the absence of new science advice, which will not be available until later in 2019. The department will consult on management options including no announced TAC for Atlantic seals (2018 approach) while respecting the most recent science advice. Continued monitoring with no set TAC saw relatively little reaction from anti-sealing and animal rights groups in 2017 and 2018 and was generally accepted by industry.

Current market demand for seal products is well below the maximum supply capacity of current licence holders. However, there is industry interest in the broader issue of predator impacts on commercial fish stocks. Industry is calling for a more ecosystem-based approach to harp seal management through higher harvest levels with a fisheries stewardship rationale. With growing awareness of the ecosystem impacts of seals on fish populations on both the east and west coasts, it is expected that ASAC consultations will take up the desire to put downward pressure on seal populations with the goal of protecting commercial fish stocks.

SCIENCE ADVICE

For harp seals, there is no new science advice; previous advice in 2014 suggested removals of 325,000 harp seals. A population assessment was conducted in March 2017, with results not expected until late 2019. For grey seals, a population assessment was conducted in 2016. Science advice suggests a harvest of 34,500 seals; 30,000 harvest in the Scotian Shelf and a 4,500 harvest in the Gulf of St. Lawrence.

INTERDEPARTMENTAL CONSULTATIONS

No interdepartmental consultations were required.

INDIGENOUS CONSULTATIONS

Indigenous groups are represented as members of the ASAC and will receive a supplementary consultation session in addition to the full ASAC meeting.

EXTERNAL CONSULTATIONS

The Department has undertaken discussions with representatives of the NL and QC sealing industries on the licence freeze, most recently in March 2018. Both groups expressed potential flexibility in their proposals in the interest of lifting the freeze in time for the 2019 fishery.

ADVICE AND RECOMMENDATIONS TO MINISTER

Based on consultations with industry on a proposed approach to lifting the freeze on commercial harp seal licences and options for TAC for Atlantic seals in 2019, the Department will return to you with recommendations for your decision.

Catherine Blewett	Kevin Stringer
Deputy Minister	Associate Deputy Minister

Attachments: (2)

- 1) Overview of the Atlantic Seal Harvest (EKME# 3965289)
- 2) Memo for the Minister: Freeze on Commercial Harp Seal Licences (EKME# 3907697)

TAB 1) Overview of the Atlantic Seal Harvest

Atlantic Seal Management

Commercially harvested Atlantic seal species include Northwest Atlantic harp seals, grey seals and hooded seals. Very few hooded seals are harvested each year. Canada's seal management areas are shown in the Maps at Figures 1 and 2.

The management strategy for Atlantic seals incorporates a precautionary approach and recognizes two key reference points that create three population management zones; the precautionary and critical reference limits define healthy, cautious and critical zones of abundance. Management actions are triggered when zone thresholds are exceeded, to reduce the risk of depletion of the resource.

The management objective for this fishery is that there is an 80% likelihood that the population be above the precautionary reference level. Currently, the precautionary and critical reference levels are defined as 70% and 30% of the maximum observed population size.

Harp seal fishery:

- Approximately 70% of the harp seal harvest occurs on the Front, an area off the north and east coasts of Newfoundland and southern Labrador (see Figure 1), with the remainder occurring in the Gulf of St. Lawrence. The harvest traditionally takes place from late March until mid-May as outlined by Variation Order.
- The harp seal population was last estimated to be 7.4 million animals (2012). A stock assessment was initiated in 2017. Assessment results are expected in November 2019.
- Previous TAC (2016) for harp seals was 400,000. No TAC was announced for harp seals in 2017 or 2018 but instead, catches were closely monitored. Harp seal landings were approximately 59,000 animals in 2018 which is in line with the current market demand. 81,000 and 66,800 harps seals were harvested in 2017 and 2016, respectively.
- There are approximately 5,660 commercial harp seal licence holders (consisting of approximately 850 assistant category licence holders) (see Figure 3). Participation in recent years has been low with approximately 600 active harvesters per year.

Grey seal fishery:

- Grey seals remain present in Atlantic Canada throughout the year, with seasonal movements occurring within the region. The small commercial harvest near the Magdalen Islands (see Figure 2) may occur in January and February, and other grey seal harvests may be approved by Variation Order.
- The grey seal population was estimated to be 424,000 animals in 2016. The most recent science advice for this stock suggests a maximum harvest of 34,500 animals.
- Previous TAC (2016) for grey seals was 60,000. No TAC was announced for grey seals in 2017 or 2018 but landings were closely monitored. Grey seal landings were only approximately 60 animals in 2018 given unfavorable ice conditions. Approximately 1,600 grey seals were harvested in 2017 and 2016, respectively. Landings have not exceeded 1,700 animals at any point in recent years.

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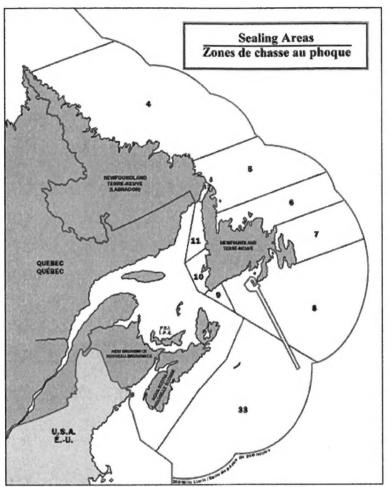


Figure 1. Map of sealing areas 4 to 11 and 33 which cover Newfoundland and Labrador, the area known as the Front.

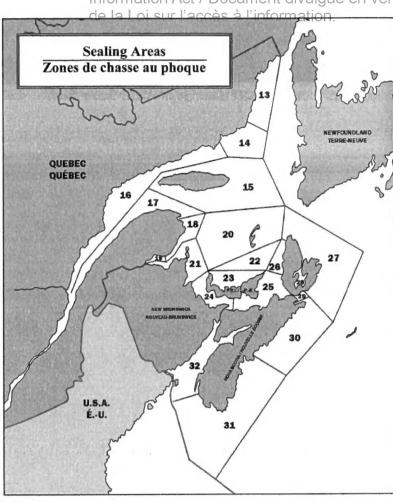


Figure 2. Map of sealing areas 13-27 and 30-32, in the area known as the Gulf of St. Lawrence.

Year	NL	Maritimes	Quebec	Gulf	Total
2009	11,146	83	1,766	82	13,077
2010	10,668	54	1,729	84	12,535
2011	10,140	47	1,690	103	11,980
2012	9,682	44	1,648	79	11,453
2013	9,221	52	1,558	81	10,912
2014	8,641	53	1,239	78	10,011
2015	7,059	48	974	64	8,145
2016	4,909	47	1,000	63	6,019
2017	4,558	45	1001	61	5,665

Figure 3. Total number of commercial sealing licences (includes assistant and professional category licences) according to region, for the period of 2009-2017.

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UNCLASSIFIED GCCMS #: 2018-009-00223

EKME #: 3903259

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Pour:	Catherine Blewett	Date:	
Object: Objet:	FREEZE ON COMMERCIAL	_ HARP SEAL LICENCES	$\sim \sim \sim \sim 1$
From / De:	Adam Burns, Director Genera	l, Fisheries Resource Manager	
√ia:	Sylvie Lapointe, Assistant Dep	puty Minister, Fisheries Resour	ce Management 2 6 AVR.
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Fisheries and Oceans Canada Pêches et Océans

Canada

Deputy Minister

Sous-ministre

<u>UNCLASSIFIED</u> 2018-009-00223 EKME #: 3903259

MEMORANDUM FOR THE MINISTER

Freeze on Commercial Harp Seal Licences (FOR INFORMATION)

SUMMARY OF ADVICE TO MINISTER

The purpose of this note is to respond to an informal request received from your office regarding the status of the freeze on commercial harp seal licences.

The Department received requests from the Quebec and Newfoundland and Labrador (NL) industry to lift the current freeze on the issuance of new harps seals licences which has been in place since 2004. The freeze was initially implemented at the request of industry in order to support the professionalization of the sealing industry at a time where there was a high level of activity. Requests to lift the freeze have been made primarily in response to an aging population of professional licenced harvesters and to increase capacity in the fishery.

The Department has identified several concerns with the proposal submitted by the Canadian Sealers Association (CSA) representing the NL sealing industry (see attached proposal in TAB 1), namely imposing new fees in the way of membership requirements with the CSA and a fee to the NL Professional Fish Harvesters Certification Board. The Quebec industry has informed DFO that it will submit a new formal proposal to the Department on lifting the freeze later this year.

The Department will undertake broad consultations on a possible lifting of the licence freeze at a face-to-face meeting of the Atlantic Seals Advisory Committee (ASAC) to take place later this fall. Discussions with Quebec and NL industry on a potential approach to lifting the freeze will continue in advance of ASAC. A recommended approach will be provided to you for decision in advance of the 2019 season.

BACKGROUND

Industry has requested a lifting of the freeze on the issuance of new commercial harp sealing licences (grey seal licences are still available), implemented in 2004 at a time where activity in the seal fishery was high. The freeze was supported by industry at that time to allow for professionalization of the fishery, including the mandatory training and certification of sealers. Mandatory humane harvesting training was fully achieved in 2016. In 2017, the total number of commercial harp seal licence holders in Atlantic Canada was an estimated 5,654.



- 2 -

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The licence freeze currently applies to two categories of commercial harp seal licences: assistant and professional. Existing sealers in the assistant category may only harvest a seal under the supervision of a professional. The licensing freeze currently prohibits an upgrade from assistant to professional, regardless of how long they have held this status. As a result, capacity is limited under the current approach as there are no new commercial licences permitted for the fishery. Given an aging demographic and attrition of harvesters, industry has indicated there is an urgent need for additional harvesters to become professional licence holders by way of upgrading assistants to professional.

In 2017, there was an estimated 798 assistant licence holders and 3,760 professional licence holders in Newfoundland. The Canadian Sealers Association (CSA), representing the NL sealing industry, and working with the NL Professional Fish Harvesters Certification Board (PFHCB), has submitted a two-phased approach to lift the freeze (see attached proposal in TAB 1). In the first year (Phase I), the CSA requested a partial lifting of the licensing freeze to permit assistant to upgrade to professional sealers. In the second year (Phase II), the CSA would like to broaden the lifting of the freeze to permit new entrants to enter the fishery. In March 2018, the Department met in-person with CSA to discuss several concerns with their proposal.

Harvesters from Quebec have requested that a cap be placed on the number of harp seal licences in their region. Given Quebec does not have a two-level licensing strucuture like NL, this would permit new entrants to join the fishery, while ensuring that there is limited entry. This informal request submitted by Quebec industry in 2017 was withdrawn in 2018 after industry expressed plans to adapt portions of the CSA proposal and to submit a formal proposal later this year.

A teleconference of ASAC was scheduled for Spring of 2018 but was cancelled at the request of industry due to schedule conflicts and the preference to have the meeting face-to-face. This is currently planned for fall 2018.

STRATEGIC CONSIDERATIONS

The Department supports a measured and consistent approach among the regions. There are several concerns with the NL industry proposal, specifically, the implementation of new fees in the way of membership requirements with the CSA and a fee to the NL PFHCB to run the program to certify/upgrade sealing licences. In addition, as written the proposal could increase the number of licensed harvesters without a prescribed cap.

In recent discussions, CSA showed flexibility in their proposal with respect to waiving proposed fees and the request for no cap on the number of licences issued, if it meant faster action for lifting the freeze. The NL sealing industry prefers that a regional approach be taken and that a decision not be delayed in anticipation of a proposal from Quebec harvesters.

Given the CSA has experienced a notable decline in membership in recent years, a more broadbased consultative process through ASAC is required to confirm harvester support for the proposal. Given that the seal fishery is managed on an Atlantic-wide basis, any changes to the freeze on harp seal licences should be applied consistently across Quebec and the Atlantic provinces. Should the freeze be lifted, there is a need for sufficient time to assess and process potential large number of new/upgraded licence requests in NL in advance of the next seal season.

The commercial harvest of seals continues to be constrained by a lack of markets for seal products, in part due to bans instituted by trading partners and current market demand being met by existing participants. There is continued frustration within industry of a perceived lack of government support and activity on behalf of the sealing industry. Representatives for harvesters in Quebec and NL are likely to support the potential opportunity for an increase in the number of licensed professional sealers, however this could renew ENGO focus on the harvest, further hindering market access efforts.

INTERDEPARTMENTAL CONSULTATIONS

No interdepartmental consultations were required.

INDIGENOUS CONSULTATIONS

Indigenous groups are represented as members on the Atlantic Seal Advisory Committee.

EXTERNAL CONSULTATIONS

The Department has undertaken discussion with representatives of the sealing industry, including harvesters and processors, sealing associations, the Atlantic Provinces and Quebec.

ADVICE AND RECOMMENDATIONS TO MINISTER

The Department will continue to consult, at the regional level, with Quebec and NL industry to discuss a potential approach to lifting the freeze.

The Department will evaluate the industry proposals for a potential lifting of the current freeze on commercial harps seal licences and return to you with a recommendation in the fall following a face-to-face meeting of ASAC.

Catherine Blewett Kevin Stringer
Deputy Minister Associate Deputy Minister

Attachment:

TAB 1- Proposal submitted to the Department by the Canadian Sealers Association (CSA)

A Proposal to Lift the Current Freeze on Commercial Seal Licences, and Implement a New Commercial Seal Licencing Structure

Submitted to:

Fisheries and Oceans Canada (DFO) - Newfoundland and Labrador Region

Submitted by:

Canadian Sealers Association (CSA)

With the support of:

Fish Food and Allied Workers (FFAW/Unifor)
Professional Fish Harvesters Certification Board (PFHCB)
Carino Processing Ltd. — Processor of Seal Products
Phocalux International Inc. — Processor of Seal Products
Department of Fisheries and Land Resources (DFLR)
The Fur Institute of Canada (FIC)

February 2017

Pages 13 to / à 22 are withheld pursuant to section sont retenues en vertu de l'article

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> UNCLASSIFIED GCCMS #: 2018-FHM-00318 EKME #: 3955151

To: Pour:	Catherine Blewett	Date:	
Object: Objet:	2019 Atlantic Seal Mana	agement	
From / De:	Adam Burns, Director Ge	neral, Fisheries Resource Mar	nagement
Via:	Sylvie Lapointe, Assistan	t Deputy Minister, Fisheries Ha	arbour Management
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Nadeau, Simon (NCR)

De:

D'Aoust, Courtney

Envoyé:

9 novembre 2018 15:55

À:

D'Aoust, Courtney

Objet:

Record of Discussion - Atlantic Seal Advisory Committee / Compte rendu des

discussions - Comité consultatif des phoques de l'Atlantique

Pièces jointes:

ASAC_Record_of_Discussion_2018_EN.pdf; CCPA_Compte_rendu_des_discussions_2018

_FR.pdf

SENT ON BEHALF OF DAVID WHORLEY, CHAIR, ATLANTIC SEAL ADVISORY COMMITTEE (ASAC)

Hello.

Please find attached the Draft Record of Discussion from the Atlantic Seal Advisory Committee meeting that took place October 17, 2018. Comments may be provided to Courtney D'Aoust (courtney.d'aoust@dfo-mpo.gc.ca) until November 23, 2018. A final version of the Record of Discussion will be distributed.

Thank you.

ENVOYÉ DE LA PART DE DAVID WHORLEY, PRÉSIDENT, COMITÉ CONSULTATIF DES PHOQUES DE L'ATLANTIQUE (CCPA)

Bonjour,

Veuillez trouver ci-joint le Compte rendu des discussions (ébauche) de la réunion du comité consultatif des phoques de l'Atlantique qui s'est passé le 17 octobre 2018. Les commentaires peuvent être adressés à Courtney D'Aoust (courtney.d'aoust@dfo-mpo.gc.ca) jusqu'au 23 novembre, 2018. Une version finale du compte rendu des discussions sera distribuée.

Merci.

Courtney D'Aoust

Fisheries and Aquaculture Management Officer |
Agent, Gestion des pêches et de l'aquaculture
Fisheries and Oceans | Pêches et océans
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Government of Canada | Gouvernement du Canada

Record of Discussion

Atlantic Seal Advisory Committee October 17, 2018 9:00 AM - 4:00 PM

s.19(1)

	Welcome and Opening Remarks	David Whorley, DFO Resource Management	
1.	Highlights/Outcome: David Whorley, Department of Fisheries and Oceans (DFO), Director Resource Management chaired the meeting. The Chair previewed the Agenda and asked for any additions. No additional agenda items were proposed. For Action: Nil		
	Reference Documents: Atlantic Seal Advisory Committee	e Agenda 2018	
	Grey Seal Working Group (GSWG) update	Brian Lester, DFO Resource Management	
2.	stocks.	ine Mammal Regulations to reflect seals. ed studies including continued adult seals. DFO will consider urther research on harvesting tools rey seal predation on important fis	
oction described on the mipacion of groy cour production			
	 of the Atlantic Veterinary College, UPEI, will share results from h work on contaminants and pathogens in grey seals for human consumption. 		
	A separate record of discussion from the Grey Seal Working Group is being prepared.		

2

bleeding technique study in support of a potential regulatory amendment. A sub-group will be established to explore this and other possible regulatory changes, in coordination with DFO's Legislative and Regulatory Affairs Committee. DFO Resource Management will work with industry to address regional humane harvesting training needs. DFO regional offices will continue to work closely with harvesters in determining grey seal harvest opening dates. Reference Documents: N/A Mike Hammill, DFO **DFO Science Presentation** Science Highlights/Outcome: DFO Science presented findings on shifts in preferred breeding habitat among grey seals with a decline in ice cover and identified new sites colonized by grey seals over the last 20 years. In Canada the grey seal population has expanded from around 15,000 in 1960, to an estimated 424,300 animals in 2016. While the number of animals can be allocated to Gulf and Scotian Shelf breeding populations based on winter surveys, DFO Science has not been able to quantify the movement of animals between these areas outside of the breeding season. Prior to the 1980s, the majority of grey seals occurred in the Gulf of St Lawrence. In 2016, it was estimated that 90% of the population is from the Scotian Shelf and only 10% from the Gulf of St Lawrence. Results of the 2017 population survey for harp seals will not be available until Fall 2019. The 3. latest population estimate for harp seals from 2014 was 7.4 million animals. The population appears to be relatively stable, showing little change in abundance since 2004. Over the last few decades there has been a decline in total length and in body weight of harp seals. This change is expected; as populations increase in size, there is increased competition between individuals for food. The consequence is a reduction in growth, a change in size at age and a decline in overall body condition. This should lead to a decline in productivity of the herd as females reach maturity at an older age, and/or there is a decline in the number of females giving birth, and has been observed. While there has been an overall decline in productivity of the herd, there has been an increase in inter-annual variability as animals respond to year to year fluctuations in availability of food resources. For Action: DFO Science will review and build on existing studies to understand better and provide advice on predator-prey interactions between grey seal and key Atlantic commercial fish species. Reference Documents: Presentation: Grey Seals and Harps Seals in Eastern Canada (Oct 2018) Management Considerations: Total Allowable Catches (TAC) for David Whorley, DFO Atlantic Seals for 2019 Resource Management 4. Highlights/Outcome: The Committee urged for a review of the current management framework and objectives. and the adoption of a more ecosystem-based approach to managing seal populations to



take into account the need for broader fish stocks recovery and non-fishing related mortality from seals; the committee views the current precautionary approach as at odds with ecosystem-based management and aims to maintain a population of seals that it considers too high, and harmful to the recovery of various fish stocks and the diversity and sustainability of catch in Atlantic fisheries. Peer-reviewed results of the 2017 stock assessment for harp seals will not be available until fall 2019. Committee members were not supportive of the most recent grey seal science advice that recommended a lowering of the TAC to 34,500 animals (specifically 30,000 animal harvest in the Scotian Shelf and 4,500 in the Gulf of St. Lawrence). There is no new science advice for hooded seals. The number of animals harvested remains well within sustainable levels; recent landings represent a small fraction of previous TAC levels. The Committee was in support of maintaining the current approach to closely monitor the fishery for harp, grey and hooded seals without a TAC announcement for the 2019 season. For Action: DFO Officials to ensure the Minister receives the committee's views for consideration in making decisions on management measures for the 2019 season. Reference Documents: N/A David Whorley, DFO Management Considerations: Freeze on commercial harp seal Resource Management licences Highlights/Outcome: The Committee reviewed and discussed proposals from Quebec and Newfoundland & Labrador on approaches for moving forward from the freeze on commercial harp seal licences. The proposals aligned on putting in place controls on participation in the harvest. There was consensus among the Committee in support of converting existing assistant seal harvesters to the professional category, something viewed as overdue. There was similarly strong support for moving forward with industry professionalization to control harvester levels based on the multi-year training requirement system that has been in place over the 14-year freeze period rather than a set maximum number of licences available. The Committee noted that the Department should not anticipate a sharp increase in harvesters due to the multi-year requirements needed to become a professional harvester, retirements facilitated by the concession of assistants, and a modest level of demand for seal licences. The Committee stressed the importance of moving forward in a timely way with these measures, in advance of the coming season. The committee recognized the possibility in the short-run of differing levels of regional training capacity available, but agreed that inter-5. regional cooperation would help to facilitate progress. For Action: The Department to convey the Committee's consensus proposal for the 2019 fishery. Reference Documents: Canadian Sealers Association Proposal (Feb 2017) Association des chasseurs de phoques intra-Québec Proposal (Feb 2018) Rob Freake, Transport Safety At Sea Canada 6. Highlights/Outcome:



Canada

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As per the Memorandum of Understanding between DFO and Transport Canada to keep stakeholders informed on issues with respect to safety at sea, Transport Canada addressed 2017 amendments to the Fishing Vessel Safety Regulations. New requirements for written safety procedures, safety equipment, procedures and vessel stability were identified. Small fishing vessels' Authorized Representatives should become familiar with the new requirements and take the necessary steps to ensure they are in compliance. Up to date information is available through Transport Canada's Small Fishing Vessel Safety webpage.

For Action: Nil

Reference Documents:

Presentation: Fishing Vessel Safety Regulations (FVSR)

(EN) https://www.tc.gc.ca/eng/marinesafety/debs-fishing-vessels-small-menu-292.htm

Certification & Market Access Program for Seals Update

Matt Sweeting-Woods, DFO Trade & International Market Access

Highlights/Outcome:

An overview of the Certification & Market Access Program for Seals (CMAPS) including a list of funding recipients was provided with a breakdown of funding according to each CMAPS pillar. The Committee requested that information on the outcomes of projects funded through CMAPS be circulated to industry.

Alternative sources of funding of potential interest to the Committee were presented including the Canadian Northern Economic Development Agency and the Atlantic Canada Opportunities Agency.

The Committee expressed frustration at the closing of international markets, particularly China and India and limited efforts to keep them open.

2019-2020 marks the final year of CMAPS. A call for expressions of interest will be made to 7. industry in December 2018, followed by a formal call for proposals in January 2019. Continuation of the program beyond 2020 will depend upon a review of program success. Committee members have requested to be more engaged in future program design and development in light of concern for limited funding opportunity for non-indigenous industry members and a lack of targeted funding available to Quebec industry.

For Action: DFO to prepare a report on the outcomes of projects funded by CMAPS for circulation to industry as well as provide a list of relevant funding program webpages. DFO to launch the submission process for 2019-2020 CMAPS project proposals in December 2018.

Reference Documents:

Presentation: Certification & Market Access Program for Seals (Atlantic Seal Advisory Committee October 17, 2018)

List of relevant contacts/websites for distribution to the Committee.

8. **Humane Harvesting**

Canada

Fisheries and Oceans Canada Pêches et Océans Canada

5

9(1)		Atlantic Veterinary College, UPEI	
	Highlights/Outcome:		
	highlighted that as the sealing industry ex and species there is a need to test the efficacy of harvesting to potential issues of animal welfare. Study results on alternative will be submitted as a request for peer-review for the 2019-202 capacity constraints, requests for peer-reviewed science informaddressed in the order prioritized. Industry expressed a need for timely incorporation of animal was an expression of animal was a sealing industry expressed.	ools and methods to address methods to bleed grey seals 20 review period. Due to mation and advice are being	
	regulation, specifically, completed studies on ammunition for the beaters previously reviewed and approved by DFO Science. To for continued study in the area of animal welfare including the charvest adult seals and is interested in ways to expedite review	he harvest of grey seal The Committee was in suppor efficacy of ammunition used to	
	For Action: See above For Action as part of the Grey Seal Wo	rking Group update (2).	
	Reference Documents: Presentation: "Ballistic tests for adult s	seals"	
	Integrated Fisheries Management Plan	David Whorley, DFO Resource Management	
	Highlights/Outcome:		
9.	The Integrated Fisheries Management Plan (IFMP) for Atlantic online via the DFO website is due for update (expired 2015). Vunderway and is anticipated to be ready for consultation via the	Work on an updated draft is	
	For Action: DFO to inform Committee members of upcoming of IFMP.	consultations on the draft	
	Reference Documents: (EN) http://www.dfo-mpo.gc.ca/fm-gp/rapports/mgtplan-planges20112015/mgtplan-planges2011201		
	Grey Seal Outfitter Operation	Cedric Arseneau, DFO Resource Management	
	Highlights/Outcome:		
10.	The 2018 regional Seal Advisory Committee in Quebec saw a a grey seal outfitter in the Magdalen Islands as long as activiti orderly manner and in keeping with the proper management a offered no objection to the operator's request to possibly expa to host foreign participants. The Committee viewed this as a p the industry in all regions, but stressed the need for maintaining ensuring proper training. There was particular interest among similar operations.	es were conducted in an and control of fisheries. ASAC and the scope of the operation ositive opportunity to advancing a professional conduct and	
	It was suggested that the Eastern Canada Licensing Policy be operations currently authorized under an experimental licence consider issuing experimental licences to others for similar op	. In the meantime, DFO will	



Fisheries and Oceans Canada

Pêches et Océans Canada

	For Action: DFO to explore options to incorporate outfitter operations within the Eastern Canada Licensing Policy.		
	Reference Documents: (EN) http://www.dfo-mpo.gc.ca/frpermis/index-eng.htm	n-gp/policies-politiques/licences-	
	Fisheries Act	David Whorley, DFO Resource Management	
11.	Highlights/Outcome: The Chair provided a brief overview of the proposed amendments to the <i>Fisheries Act</i> in eight key areas as part of Bill C-68. These amendments were highlighted as a positive step towards restoring lost protections and incorporating modern safeguards into the <i>Act</i> . Committee members were encouraged to review the proposed amendments that recently underwent first reading in the Senate.		
	For Action: Nil Reference Documents: (EN) http://www.dfo-mpo.gc.ca/cloi-sur-les-peches/proposed-propose-eng.html	ampaign-campagne/fisheries-act-	
	Reference Documents: (EN) http://www.dfo-mpo.gc.ca/c	ampaign-campagne/fisheries-act- David Whorley, DFO Resource Management	
12.	Reference Documents: (EN) http://www.dfo-mpo.gc.ca/cloi-sur-les-peches/proposed-propose-eng.html	David Whorley, DFO Resource Management Discussion that includes main	
12.	Reference Documents: (EN) http://www.dfo-mpo.gc.ca/cloi-sur-les-peches/proposed-propose-eng.html Closing Remarks Highlights/Outcome: The Chair committed to providing a high-level Record of	David Whorley, DFO Resource Management Discussion that includes main	



Compte rendu des discussions Comité consultatif des phoque de l'Atlantique

17 octobre 2018, de 9 h à 16 h

s.19(1)

	Accueil et mot d'ouverture	David Whorley, Gestion des ressources du MPC	
1.	Points saillants/résultats : David Whorley, ministère des Pêches et des Océans (MPO), di ressources, préside la réunion. Le président passe en revue l'o a des points à ajouter. Aucun point supplémentaire à l'ordre du	rdre du jour et demande s'il	
	Mesures à prendre : Néant		
	Documents de référence : Ordre du jour 2018 du Comité consul'Atlantique	ıltatif des phoques de	
	Mise à jour du Groupe de travail sur le phoque gris (GTPG)	Brian Lester, MPO, Gestion des ressources	
	Points saillants/résultats :		
	Brian Lester, président du GTPG, fait le compte rendu de la réu Les principaux résultats de cette réunion sont les suivants :	union du 16 octobre 2018.	
	 Les membres du groupe de travail demandent que des modifications soient apportées au Règlement sur les mammifères marins afin de tenir compte de la nature de la chasse plus récente des phoques gris adultes. 		
2.	Les membres appuient la recherche dans le cadre d'études animaux, y compris l'étude continue de l'efficacité de chasser les phoques adultes. Le MPO étudiera les dem expérimentaux, au besoin, pour poursuivre la recherche méthodes de récolte.	les munitions utilisées pour andes de permis	
 Le GTPG cherche à obtenir des données scientific répercussions de la prédation exercée par le phot poissons. 			
	 Les membres soulignent qu'ils n'acceptent pas l'évaluation des stocks de phoques gris de 2016, qui recommande une réduction du TAC de phoques gris pour une population que les intervenants de l'industrie considèrent abondante et de plus en plus prédatrice à l'égard des stocks de poisson de fond. 		
	 Le Secteur des sciences du MPO présente des travaux colonies de mise bas de phoques gris, ainsi que des es respectives au fil du temps. 		
	 du Collège vétérinaire de l'Atlantique l'Île-du-Prince-Édouard, fera part des résultats de ses tres 		



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et les agents pathogènes présents dans les phoques gris destinés à la consommation humaine.

Un compte rendu distinct des discussions du groupe de travail sur le phoque gris est en préparation.

Mesures à prendre : Le Secteur des sciences du MPO examinera les options pour accélérer l'examen par les pairs d'une étude sur les techniques de saignée à l'appui d'une éventuelle modification réglementaire. Un sous-groupe sera mis sur pied pour étudier cette question et les autres modifications réglementaires possibles, en coordination avec le Comité des affaires législatives et réglementaires du MPO. La Gestion des ressources du MPO travaillera avec l'industrie pour répondre aux besoins régionaux de formation en matière de chasse sans cruauté.

Les bureaux régionaux du MPO continueront de travailler en étroite collaboration avec les chasseurs pour déterminer les dates d'ouverture de la chasse au phoque gris afin de permettre l'accès aux troupeaux.

Documents de référence : S.O.

Présentation du Secteur des sciences du MPO

Mike Hammill, Secteur des sciences du MPO

Points saillants/résultats:

Le Secteur des sciences du MPO présente les constatations sur les déplacements de l'habitat de reproduction préféré du phoque gris liés à la diminution de la couverture de glace et indique les nouveaux sites colonisés par le phoque gris au cours des 20 dernières années. Au Canada, la population de phoques gris est passée d'environ 15 000 en 1960 à 424 300 animaux (estimations) en 2016. Bien que le nombre d'animaux puisse être attribué aux populations reproductrices du Golfe et du plateau néo-écossais d'après les relevés hivernaux, le Secteur des sciences du MPO n'a pas été en mesure de quantifier les déplacements des animaux entre ces zones en dehors de la saison de reproduction. Avant les années 1980, la majorité des phoques gris se trouvaient dans le golfe du Saint-Laurent. En 2016, on estimait que 90 % de la population provenait du plateau néo-écossais et seulement 10 % du golfe du Saint-Laurent.

3.

Les résultats du relevé de la population de phoques du Groenland de 2017 ne seront pas disponibles avant l'automne 2019. La dernière estimation de la population de phoques du Groenland de 2014 était de 7,4 millions d'animaux. La population semble être relativement stable avec peu de changements dans l'abondance depuis 2004. Au cours des dernières décennies, la longueur totale et le poids corporel des phogues du Groenland ont diminué. Ce changement est attendu; à mesure que la taille des populations augmente, il y a de plus en plus de concurrence entre les individus pour la nourriture. Il en résulte une réduction de la croissance, un changement de taille en fonction de l'âge et un déclin de l'état général du corps. Cela devrait entraîner une baisse de la productivité du troupeau, les femelles atteignant la maturité à un âge plus avancé et/ou le nombre de femelles mettant bas diminuant, ce qui a été observé. Malgré la baisse générale de la productivité du troupeau, il y a eu une augmentation de la variabilité interannuelle, car les animaux réagissent aux fluctuations d'une année à l'autre de la disponibilité des ressources alimentaires.



	Mesures à prendre : Le Secteur des sciences du MPO examiners s'appuiera sur celles-ci pour mieux comprendre les interactions de phoque gris et les principales espèces commerciales de poiss fournir des conseils à cet égard.	de prédateur à proie entre		
	Documents de référence :			
	Présentation : Phoques gris et phoques du Groenland dans l'Est	du Canada (octobre 2018)		
	Considérations de gestion : Total autorisé des captures (TAC) des phoques de l'Atlantique pour 2019	David Whorley, Gestion des ressources du MPO		
	Points saillants/résultats :			
	Le Comité demande instamment un examen du cadre et des objectifs de gestion a l'adoption d'une approche plus écosystémique de la gestion des populations de phafin de tenir compte de la nécessité d'un rétablissement plus large des stocks de pet de la mortalité non liée à la pêche causée par les phoques; le Comité estime que l'approche de précaution actuelle est contraire à la gestion écosystémique et vise maintenir une population de phoques trop élevée et nuisible au rétablissement de stocks de poissons et à la diversité et durabilité des prises dans les pêches atlantice.			
4.	stocks de poissons et à la diversité et durabilité des prises dans les pêches atlantiques. Les résultats de l'évaluation des stocks de phoques du Groenland de 2017, examinés par les pairs, ne seront pas disponibles avant l'automne 2019. Les membres du Comité n'appuient pas l'avis scientifique le plus récent sur le phoque gris, qui recommande de réduire le TAC à 34 500 animaux (précisément 30 000 animaux récoltés sur le plateau néo-écossais et 4 500 dans le golfe du Saint-Laurent). Il n'y a pas de nouvel avis scientifique sur le phoque à capuchon. Le nombre d'animaux récoltés reste bien en deçà des niveaux durables; les débarquements récents ne représentent qu'une petite fraction de			
	niveaux précédents du TAC. Le Comité est en faveur du maintien de l'approche actuelle consistant à surveiller étroitement la pêche au phoque du Groenland, au phoque gris et au phoque à capuchon sans annonce du TAC pour la saison 2019.			
	Mesures à prendre : Les responsables du MPO veilleront à ce que le ministre reçoive les points de vue du Comité pour qu'il en tienne compte dans la prise de décisions sur les mesures de gestion pour la saison 2019.			
	Documents de référence : S.O.			
	Considérations de gestion : Gel des permis commerciaux de chasse au phoque du Groenland	David Whorley, Gestion des ressources du MPO		
	Points saillants/résultats :			
	Le Comité examine et discute les propositions du Québec et de Terre-Neuve-et-Labrador sur les approches à adopter pour mettre fin au gel des permis de chasse commerciale du phoque du Groenland. Les propositions concordent sur la mise en place de contrôles de la participation à la récolte basés sur le rendement.			
5.	Il y a eu un consensus au sein du Comité en faveur de la conver de phoques actuels à la catégorie professionnelle, ce qui aurait o longtemps. De même, les membres du Comité sont fortement en la professionnalisation de l'industrie pour contrôler les niveaux de	dû être fait depuis faveur de continuer avec		



Canada

programmes de formation pluriannuel qui ont été en place pendant la période de gel de 14 ans plutôt qu'en fonction d'un nombre maximal de permis disponibles établi. Le Comité fait observer que le Ministère ne devrait pas s'attendre à une forte augmentation du nombre de chasseurs en raison des exigences pluriannuelles nécessaires pour devenir un chasseur professionnel, des départs à la retraite facilités par la concession d'adjoints et d'un niveau modeste de demandes de permis de chasse au phoque. Le Comité souligne l'importance de mettre en œuvre ces mesures en temps opportun, avant la saison à venir. Le Comité reconnaît la possibilité à court terme de disposer de capacités de formation régionales différentes, mais il est convenu que la coopération interrégionale contribuera à faciliter les progrès. Mesures à prendre : Le Ministère transmettra la proposition consensuelle du Comité pour la pêche de 2019. Documents de référence : Proposition de l'Association canadienne des chasseurs de phoque (février 2017) Proposition de l'Association des chasseurs de phoques intra-Québec (février 2018) Rob Freake, Transports Sécurité en mer Canada Points saillants/résultats : Conformément au protocole d'entente entre le MPO et Transports Canada visant à tenir les intervenants au courant des questions relatives à la sécurité en mer, Transports Canada a apporté des modifications au Règlement sur la sécurité des bateaux de pêche en 2017. De nouvelles exigences concernant les procédures de sécurité écrites, l'équipement de sécurité, les procédures et la stabilité des bateaux ont été énoncées. Les représentants autorisés des petits bateaux de pêche devraient se familiariser avec les nouvelles exigences et prendre les mesures nécessaires pour s'assurer de leur conformité. Des 6. renseignements à jour sont disponibles sur la page Web de la Sécurité des petits bateaux de pêche de Transports Canada. Mesures à prendre : Néant Documents de référence : Présentation : Règlement sur la sécurité des bateaux de pêche (FR) https://www.tc.gc.ca/fra/securitemaritime/desn-bateaux-de-peche-petit-menu-292.htm Matt Sweeting-Woods, Commerce et accès aux Mise à jour sur le Programme de certification et d'accès aux marchés internationaux marchés des produits du phoque du MPO 7. Points saillants/résultats : Un aperçu du Programme de certification et d'accès aux marchés des produits du phoque (PCAMPP), y compris une liste des bénéficiaires de financement, est présenté, ainsi qu'une ventilation du financement selon chaque pilier du PCAMPP. Le Comité demande que les renseignements sur les résultats des projets financés dans le cadre du PCAMPP soient



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communiqués à l'industrie.

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D'autres sources de financement susceptibles d'intéresser le Comité sont présentées, notamment l'Agence canadienne de développement économique du Nord et l'Agence de promotion économique du Canada atlantique.

Le Comité se dit frustré par la fermeture des marchés internationaux, en particulier ceux de la Chine et de l'Inde, et par les efforts limités déployés pour les maintenir ouverts.

L'exercice 2019-2020 marque la dernière année du PCAMPP. Un appel de manifestations d'intérêt sera lancé à l'industrie en décembre 2018, suivi d'un appel de propositions officiel en janvier 2019. La poursuite du programme au-delà de 2020 dépendra de l'examen du succès du programme. Les membres du Comité demandent à participer davantage à la conception et à l'élaboration des futurs programmes, compte tenu des préoccupations concernant les possibilités de financement limitées pour les membres non autochtones de l'industrie et du manque de financement ciblé offert à l'industrie québécoise.

Mesures à prendre : Le MPO préparera un rapport sur les résultats des projets financés par le PCAMPP aux fins de diffusion à l'industrie et fournira une liste des pages Web des programmes de financement pertinents. Le MPO lancera le processus de présentation des propositions de projet dans le cadre du PCAMPP 2019-2020 en décembre 2018.

Documents de référence :

Présentation : Programme de certification et d'accès aux marchés des produits du phoque (Comité consultatif sur les phoques de l'Atlantique, 17 octobre 2018)

Liste des personnes-ressources/sites Web pertinents aux fins de distribution au Comité.

Chasse sans cruauté

Collège vétérinaire de l'Atlantique, Université de l'Île-du-Prince-Édouard

Points saillants/résultats :

souligne qu'à mesure que l'industrie de la chasse au phoque s'étend à d'autres classes d'âge et à d'autres espèces, il est nécessaire de tester l'efficacité des outils et des méthodes de chasse pour résoudre les problèmes potentiels relatifs au bien-être des animaux. Les résultats de l'étude sur les méthodes de rechange à la saignée des phoques gris seront présentés dans le cadre d'une demande d'examen par les pairs dans le cadre de la période d'examen 2019-2020. En raison de contraintes de capacité, les demandes d'information et d'avis scientifiques examinés par les pairs sont traitées dans l'ordre de priorité établi.

L'industrie exprime le besoin d'incorporer en temps opportun les résultats des études sur le bien-être des animaux dans la réglementation, en particulier les études effectuées sur les munitions pour la chasse au phoque gris brasseur qui ont été examinées et approuvées par le Secteur des sciences du MPO. Le Comité est favorable à la poursuite des études dans le domaine du bien-être des animaux, y compris l'efficacité des munitions utilisées pour chasser les phoques adultes, et s'intéresse aux moyens d'accélérer l'examen des études réalisées.

Mesures à prendre : Voir les mesures à prendre ci-dessus dans le cadre de la mise à jour

Aoust Canada



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	du Groupe de travail sur le phoque gris (2).			
	Documents de référence : Présentation : « Essais balisti	ques relatifs aux phoques adultes		
	Plan de gestion intégrée des pêches	David Whorley, Gestion des ressources du MPC		
9.	Points saillants/résultats :			
	Le Plan de gestion intégrée des pêches (PGIP) relatif au phoque de l'Atlantique actuellement accessible en ligne sur le site Web du MPO doit être mis à jour (a expiré en 2015). Le travail sur une ébauche mise à jour est en cours et devrait être prêt pour consultation par l'entremise du Comité en mars 2019.			
	Mesures à prendre : Le MPO informera les membres du sur l'ébauche du PGIP.	Comité des consultations à venir		
	Documents de référence : (FR) http://www.dfo-mpo.gc.ca/fm-gp/seal-phoque/reports-rapports/mgtplan-planges20112015/mgtplan-planges20112015-fra.htm			
	Exploitation d'une pourvoirie relative au phoque gris	Cedric Arseneau, Gestion des ressources du MPO		
	Points saillants/résultats :			
10.	Le Comité consultatif régional sur la chasse au phoque de 2018 au Québec a conclu une entente sur l'exploitation d'une pourvoirie relative au phoque gris aux Îles-de-la-Madeleine, pourvu que les activités se déroulent de façon ordonnée et dans le respect de la gestion et du contrôle appropriés des pêches. Le Comité consultatif sur le phoque de l'Atlantique ne fait aucune objection à la demande de l'exploitant d'étendre éventuellement la portée de l'exploitation à l'accueil de participants étrangers. Le Comité considère qu'il s'agit d'une occasion positive de faire progresser l'industrie dans toutes les régions, mais souligne la nécessité de maintenir une conduite professionnelle et d'assurer une formation adéquate. Les partenaires autochtones manifestent un intérêt particulier pour la poursuite d'opération similaires.			
	Il est suggéré de mettre à jour la Politique de délivrance afin de tenir compte des exploitations de pourvoiries act permis expérimental. Entre-temps, le MPO envisagera d expérimentaux à d'autres pour des opérations semblable	uellement autorisées en vertu d'un e délivrer des permis		
	Mesures à prendre : Le MPO étudiera les possibilités d'intégrer les exploitations de pourvoiries à la Politique de délivrance de permis dans l'Est du Canada.			
	Documents de référence : (FR) http://www.dfo-mpo.gc.ca/fm-gp/policies-politiques/licences-permis/index-fra.htm			
	Loi sur les pêches	David Whorley, Gestion des ressources du MPC		
11.	Points saillants/résultats :			
	Points samants/resultats.			





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	dans huit domaines clés dans le cadre du projet présentées comme une étape positive vers le rét perdues et l'intégration de mesures de protection Comité sont encouragés à examiner les modifica l'objet d'une première lecture au Sénat.	ablissement des mesures de protection modernes dans la <i>Loi</i> . Les membres du	
	Mesures à prendre : Néant		
	Documents de référence : (FR) http://www.dfo-mact-loi-sur-les-peches/proposed-propose-fra.html		
	Mot de la fin	David Whorley, Gestion des ressources du MPO	
	Points saillants/résultats :		
12.	Le président s'engage à fournir un compte rendu général des discussions, qui comprend les principaux résultats et les mesures de suivi découlant de la réunion et sera distribué au Comité.		
	Mesures à prendre : Néant		
	Documents de référence : Compte rendu des discussions du Comité consultatif sur le phoque de l'Atlantique 2018		



Lemelin, Dario

De:

Gros-Louis, Denis

Envoyé:

20 novembre 2018 09:37

À:

Whorley, David

Cc:

Wilkins, Kevin; Lemelin, Dario

Objet:

TR: Demandes de la Première Nation Malécite de Viger dans le dossier du phoque de

l'Atlantique

Pièces jointes:

phoque MPO.pdf

David, we need to chat about the request from this FN. I meet with them next week.

Denis

De: Lemire, Maryse

Envoyé: 19 novembre 2018 09:25

À: Gros-Louis, Denis < Denis.Gros-Louis@dfo-mpo.gc.ca>; Wilkins, Kevin < Kevin.Wilkins@dfo-mpo.gc.ca>; Picard,

Stéphane <Stephane.Picard@dfo-mpo.gc.ca>

Objet : TR: Demandes de la Première Nation Malécite de Viger dans le dossier du phoque de l'Atlantique

Pour action : SVP préparer un projet de réponse pour Maryse.

Délai: vendredi 23 novembre 2018

Marylène Gauthier pour

Maryse Lemire

Directrice régionale de la gestion des pêches Pêches et Océans Canada / Gouvernement du Canada Maryse.Lemire@dfo-mpo.gc.ca / Tél.: 418-648-5783

Fisheries Management Regional Director
Fisheries and Oceans Canada / Government of Canada
Maryse.Lemire@dfo-mpo.gc.ca / Tel.: 418-648-5783

De: Vincent, Patrick

Envoyé: 16 novembre 2018 15:57

À: Lemire, Maryse < Maryse. Lemire@dfo-mpo.gc.ca>

Cc: Couturier-Dubé, Geneviève < Genevieve.Couturier-Dube@dfo-mpo.gc.ca >; Bois, Lucie < Lucie.Bois@dfo-mpo.gc.ca >

Objet : Tr: Demandes de la Première Nation Malécite de Viger dans le dossier du phoque de l'Atlantique

Pour ton information et considération pour une réponse.

Merci

Envoyé de mon smartphone BlackBerry 10 sur le réseau Rogers.

De: Marie-Hélène Rondeau <mariehelene.rondeau@aghamm.ca>

Envoyé: vendredí 16 novembre 2018 3:38 PM

À: Vincent, Patrick

Cc: Gros-Louis, Denis; Larochelle, Mia; Picard, Stéphane; Leclerc, Caroline; St-Laurent, Érick; Rivierre, Antoine; Richard, Josée; Arseneau, Cédric; 'Pierre Jenniss'

Objet: Demandes de la Première Nation Malécite de Viger dans le dossier du phoque de l'Atlantique

Bonjour Monsieur Vincent,

À la demande de Monsieur Pierre Jenniss, Chef conseiller responsable des pêches commerciales à la Première Nation Malécite de Viger, je vous envoie ces deux lettres en lien avec la chasse au phoque gris et au phoque du Groenland.

Meilleures salutations,

Marie-Hélène Rondeau, M. Sc.

Coordonnatrice biologiste / Coordinator Biologist Association de gestion halieutique autochtone Mi'gmaq et Malécite (AGHAMM) Mi'gmaq Maliseet Aboriginal Fisheries Management Association (MMAFMA) 10, boulevard Perron, Gesgapegiag Qc GOC 1Y1

Bureau: 581-358-0024

Cell:

www.aghamm.ca





ENJOYING THE SEA TOGETHER s.19(1)



Monsieur Patrick Vincent Directeur général régional 104, rue Dalhousie Québec, Québec G1K 7Y7 Canada

Envoyé par courriel à : <u>Patrick.Vincent@dfo-mpo.gc.ca</u>; <u>Denis.Gros-Louis@dfo-mpo.gc.ca</u>; <u>Mia.Larochelle@dfo-mpo.gc.ca</u>; <u>Stephane.Picard@dfo-mpo.gc.ca</u>; <u>Caroline.Leclerc@dfo-mpo.gc.ca</u>; <u>Erick.St-Laurent@dfo-mpo.gc.ca</u>; <u>Antoine.Rivierre@dfo-mpo.gc.ca</u>; <u>Josee.Richard@dfo-mpo.gc.ca</u>; <u>Cedric.Arseneau@dfo-mpo.gc.ca</u>

Objet : Dégel des permis commerciaux pour le phoque du Groenland et accès à la chasse aux membres de la Première Nation Malécite de Viger

Monsieur Vincent,

s.19(1)

Dans la procédure de dégel des permis commerciaux pour la chasse au phoque du Groenland, qui est en discussion présentement, l'Association des chasseurs de phoques Intra-Québec proposera un plafond d'environ 2 000 permis. Dans l'évaluation de ce plafond, la participation des membres des Premières Nations dans la chasse commerciale au phoque du Groenland n'a pas été prise en compte, tel que mentionné par lors du comité consultatif régional sur le phoque qui a eu lieu aux Îles-de-la-Madeleine le 26 septembre 2018. La Première Nation Malécite de Viger tient à rappeler au Ministère des Pêches et des Océans que ce plafond ne doit en aucun cas affecter l'accès de ses membres aux permis commerciaux de phoque du Groenland et que cet accès constitue un droit pour les Premières Nations et non un privilège.

En vous remerciant de votre habituelle collaboration,

Pierre Jenniss

Chef conseiller et directeur des pêches commerciales

Première Nation Malécite de Viger

217, rue de la Grève

Cacouna (Québec) GOL 1GO

000040



Monsieur Patrick Vincent Directeur général régional 104, rue Dalhousie Québec (Québec) G1K 7Y7 Canada

Envoyé par courriel à : <u>Patrick.Vincent@dfo-mpo.gc.ca;</u> <u>Denis.Gros-Louis@dfo-mpo.gc.ca;</u> <u>Mia.Larochelle@dfo-mpo.gc.ca;</u> <u>Stephane.Picard@dfo-mpo.gc.ca;</u> <u>Caroline.Leclerc@dfo-mpo.gc.ca;</u> <u>Erick.St-Laurent@dfo-mpo.gc.ca;</u> <u>Antoine.Rivierre@dfo-mpo.gc.ca;</u> <u>Josee.Richard@dfo-mpo.gc.ca;</u> <u>Cedric.Arseneau@dfo-mpo.gc.ca</u>

Objet : Accès à la Première Nation Malécite de Viger à la zone fermée entre Pointe-au-Renard et Capd'Espoir pour la chasse au phoque du Groenland et au phoque gris

Monsieur Vincent,

En vertu de l'article 36 du règlement sur les mammifères marins, il est « interdit de pêcher le phoque dans les eaux adjacentes à la côte de Gaspé, dans la province de Québec, en deçà ou du côté du rivage d'une ligne droite tirée à partir de Pointe-au-Renard jusqu'à un point situé à 49°00' de latitude nord et 64°05' de longitude ouest, de là, jusqu'à un point situé à 48°25' de latitude nord et 64°05' de longitude ouest et de là, jusqu'au phare de Cap-d'Espoir ».

Nous savons que cette zone englobe la majorité des zones, en Gaspésie, où le phoque se retrouve en concentrations suffisantes pour permettre une chasse efficace et rentable. De plus, la pêche commerciale aux autres espèces est permise dans cette zone et la fermeture de cette zone, pour des raisons de conservation des troupeaux de phoques qu'on y retrouve, n'est plus pertinente en raison de l'augmentation importante des populations de phoques du Groenland et de phoques gris lors des dernières décennies. C'est pourquoi la Première Nation Malécite de Viger demande l'accès à cette zone afin que ses membres puissent y exercer une chasse commerciale au phoque gris et au phoque du Groenland.

Cette question a déjà été soulevée lors de la rencontre du Groupe de travail sur le phoque gris du 6 décembre 2017 et depuis, aucune explication valable n'a été fournie par le Ministère pour justifier le maintien de la fermeture de cette zone. Sachant que, comme nous, le Ministère est préoccupé par l'impact de la prédation des phoques sur les stocks de poissons, nous espérons trouver ensemble des moyens pour faciliter une chasse au phoque qui sera efficace et humaine.

En vous remerciant de votre habituelle collaboration,

ierre Jenniss

Chef conseiller et directeur des **pêche**s commerciales Première Nation Malécite de Viger

217, rue de la Grève

Cacouna (Québec) GOL 1GO

Nadeau, Simon (NCR)

De: D'Aoust, Courtney

Envoyé: 10 décembre 2018 11:49

À: Abraham, Christine; Nadeau, Simon **Objet:** Memos - Atlantic seal management:

Pièces jointes: MECTS-#3990321-v4-Memo_for_Info_2019_Atlantic_Seals_Management_Nov_

2018.....DOCX; MECTS-#3987009-v10-

Memo_For_Decision_to_ADM_Freeze_on_Commercial_Harp_Se....DOCX

Good morning Christine and Simon,

Please see attached advance copies of two Memos related to Atlantic seal management:

- 1. Memo to the Assistant Deputy Minister For Decision: this memo primarily recommends an approach to address the licensing freeze, but also gives recommendation for **no announced TAC** for the 2019 seal fishery.
- 2. Memo to the Minister For Information: almost identical content as the Memo for the ADM's decision. This memo provides an update on ASAC outcomes.

I have asked if the first memo, for ADM Decision should come to Science for "Additional Approval" or "For Distribution". I am waiting to hear back.

Thanks,

Courtney D'Aoust

Fisheries and Aquaculture Management Officer |
Agent, Gestion des pêches et de l'aquaculture
Fisheries and Oceans | Pêches et océans
200 rue Kent Street - 13S002B Ottawa, ON, K1A 0E6
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Government of Canada | Gouvernement du Canada



Fisheries and Oceans Canada

Pêches et Océans Canada

Fisheries Resource Management Gestion des ressources halieutiques

Director General

Directeur général

<u>UNCLASSIFIED</u> 2018-FHM-00392 EKME #: 3987009

MEMORANDUM FOR THE ASSISTANT DEPUTY MINISTER

CONTROLS ON COMMERCIAL HARP SEAL LICENCES (FOR DECISION)

SUMMARY OF ADVICE TO ASSISTANT DEPUTY MINISTER

This note seeks your approval on a consensus industry proposal to address the 15-year freeze on commercial harp seal licences, and rely on a set of process controls (TAB 1).

The recommended approach would enable the upgrade of existing assistant-category licences to professional category and permit new entrants to participate in the harvest based on a graduated, multi-year licensing process to build on professionalization of the industry. Licence totals by region and licence type are available in TAB 2.

In addition, this note seeks your approval to continue with the approach applied over the previous two years to not announce total allowable catch (TAC) for the 2019 seal harvest while closely monitoring harvest levels. The Department will explore a more ecosystem-based approach to managing seal populations that would take into account recovery efforts for key Atlantic fish stocks.

To allow for operational preparations in advance of the 2019 fishery, your decision is requested by December 17, 2018. Communication lines will be prepared.

BACKGROUND

The commercial harvest of Atlantic seals (harp, grey and hooded) remains well within sustainable levels. Recent landings represent a small fraction of previously announced total allowable catch (TAC) levels and most recent science advice. A TAC was not announced for Atlantic seals in 2017 or 2018, although the fishery was closely monitored in relation to the most recent science advice.

In 2004 at the request of industry, the Department implemented a freeze on the issuance of new commercial harp seal licences, as well as halted the upgrade of assistant-category sealers to professional category. The freeze was implemented to ensure professionalization of the fishery, including mandatory humane harvesting training (see Memorandum to the Minister at TAB 1).



The Commercial Fisheries Licensing Policy for Eastern Canada (CFLPEC), 1996 outlines the licensing structure for seals including licence categories and eligibility criteria. As per this policy, assistant sealers can only participate under the guidance of a professional sealer. Many of the current professional-level harvesters – in light of the 15-year freeze – have been renewing their licences and nominally participating in the harvest for the sole reason of supervising assistant-level harvesters restricted from upgrade.

Departmental policy prohibits re-issuance of an existing commercial sealing licence to a new sealer (non-transferrable licence). Upgrading of long-frozen assistants to professional is expected to facilitate the exit of aging current professional harvesters, and may contribute to improved occupational health and safety in this activity.

The number of commercial harp seal licence holders in Atlantic Canada and Quebec declined from approximately 13,000 in 2009 to 5,600 in 2017. A breakdown of licence totals by region and licence category are available in TAB 2. Approximately 600 commercial licence holders actively participated in the harvest in 2017.

Formal proposals from Newfoundland & Labrador and Quebec industry representatives on an approach to address the freeze were reviewed at the Atlantic Seal Advisory Committee (ASAC) meeting in October 2018. The proposals are driven in part by an aging population of professionally licensed harvesters, and the need for new professional harvesters.

STRATEGIC CONSIDERATIONS

Industry does not accept 2016 science advice to lower the grey seal TAC for a population that they consider to be abundant and predatory on depressed groundfish stocks. Industry has harvested about 1,600 grey seals per year in recent years. Hooded seal landings have been minimal. Harp seal harvests are also well below the previous TAC of 400,000 animals (60,000 to 81,000 harvested in recent years). It is unlikely that 2019 harp seal removals will increase beyond recent removals based on current market demand.

Industry supports continuing the practice of not setting a TAC while closely monitoring harvest levels in relation to the most recent science advice. Given the abundance of stocks, this is a very low-risk approach that also limits negative reactions.

There is regional consistency among the Atlantic regions and Quebec on an approach to addressing the longstanding freeze on commercial harp seal licences and proceeding with a suite of process controls on licensing uptake. The rationale for this approach is based on industry professionalization achieved over the 15-year freeze period.

Mandatory humane harvesting training for commercial sealers was introduced in 2014 and fully achieved in 2016. This requirement, in conjunction with the two-stage licensing structure that advances active assistant sealers to professionals, are controls to moderate the uptake of new licences. All new applications for assistant licences will be considered based on eligibility criteria outlined in the seals chapter of *Commercial Fisheries Licensing Policy for Eastern Canada*, 1996. The Department is working to develop a mechanism to confirm two years of active participation by new assistant sealers prior to future licence upgrade.

Members of ASAC were supportive of an upgrade of existing assistant sealers to address the issue of aging professionals. The upgrade of existing assistant sealers (approximately 850 licence holders) to professional would not constitute a change in the total number of commercial licence holders.

The Department is unable to support the Canadian Sealers Association (CSA) proposal to modify licensing policy in the Newfoundland Region requiring membership with the CSA to be a participant, given the obvious limitations on freedom of association that this approach would require. Not introducing such a requirement is consistent across the regions, and does not inhibit harvesters who might wish to join the CSA.

A downward trend in licence uptake is expected over time as the number of young harvesters entering the fishery is not likely to exceed those retiring given the physical demands and general low interest in this line of work among young people.

SCIENCE ADVICE

For harp seals, the most recent advice (2014) suggested maximum removals of 325,000 animals. A population assessment was conducted in March 2017, with results not expected until late 2019. Science advice following a 2016 population assessment for grey seals suggested a maximum harvest of 34,500 seals. The last hooded seal science advice from 2006 suggested that removals of 27,400 animals would be sustainable.

INDIGENOUS CONSULTATIONS

Indigenous partners participated in a supplementary advisory session in October, in addition to ASAC. Indigenous representatives supported permitting new entrants to join the commercial harp seal fishery in response to industry needs for new professional harvesters. Indigenous groups echoed the broader industry concerns about the impact of seal predation on fish stocks.

EXTERNAL CONSULTATIONS

ASAC, the primary consultative body for the seal fishery, met October 17th to consult on the licence freeze and TAC levels for 2019.

ADVICE AND RECOMMENDATIONS TO ASSISTANT DEPUTY MINISTER

It is recommended that you approve industry's proposal to allow new commercial sealers to join the fishery based on a set of graduated, multi-year licensing controls, and that you approve the upgrade of existing assistant category licence holders to professional category.

In addition, it is recommended that you maintain the current approach of not announcing a TAC for harp, grey and hooded seal fisheries for 2019, while actively monitoring harvest levels in relation to the most recent science advice. The Department will explore a more ecosystem-based approach to managing seals, to ensure harvest levels are in line with, and support, ongoing management action to rebuild prey fish stocks.

.../4

Following your approval, an information note will be sent to the Minister informing him of your decisions. DFO officials will inform ASAC of these management decisions affecting the 2019 fishery.

•	Lapointe
Assista	ant Deputy Minister
I	concur with the recommendations
I	do not concur with the recommendations

Attachment(s): (2)

- 1) (2004) Memo to the Minister: Requests for Grey Seal and Blueback Harvests, Licence Freeze and Increased Harp Seal TAC (EKME # 400692)
- 2) Breakdown of licence totals according to region and licence category (EKME #3990452)



Fisheries and Oceans Canada Correspondence Routing Slip

Fiche d'acheminement de correspondance Pêches et Océans Canada

UNCLASSIFIED GCCMS #: 2018-FHM-00360

EKME #: 3987009

To: Pour:	Sylvie Lapointe	Date:	
Object:	CONTROLS ON COM	MMERCIAL HARP SEAL LICENC	CES
From / De:	David Whorley, Direct	tor, Fisheries Resource Managem	ent Operations
Via:	Adam Burns, Director	General, Fisheries Resource Ma	nagement
	al approvals: approbation(s):		
Arran M	cPherson, Assistant De	eputy Minister, Ecosystems & Oce	eans Science
1	Material for the Ministe Documents pour le Min	y is an engineering	Information
Remark Remarq		e was developed in consultation w	vith the following
Distribut	Mary-Ellen Valkei Serge Doucet, Re	Regional Director General, Quebe nier, Regional Director General, N egional Director General Gulf Reg A/Regional Director General, Ne	laritimes Region ion
Drafting Rédacte	(: Y Z	AOUST (613-447-8882)/ B. LESTE	ER / D. WHORLEY / CH



ries and Oceans Pêches et Océans da Canada

Deputy Minister

Sous-ministre

<u>UNCLASSIFIED</u> 2018-FHM-00393 EKME #: 3990321

MEMORANDUM FOR THE MINISTER

2019 MANAGEMENT MEASURES FOR ATLANTIC SEALS (FOR INFORMATION)

SUMMARY OF ADVICE TO MINISTER

This note updates you on the recent Atlantic Seal Advisory Committee (ASAC) meeting that took place in Moncton, N.B. on October 17, 2018 (see Record of Discussion at TAB 1). The two main topics of discussion from this meeting were total allowable catch (TAC) levels for the 2019 fishery, and industry's request to end the 2004 freeze on commercial harp seal licences in order to achieve increased capacity in the fishery.

Seals are harvested in Newfoundland, Maritimes, Quebec and Gulf regions (see TAB 2 which includes a map of seal fishing areas).

The Department has adopted a consensus industry proposal to address the freeze, and rely on a set of process controls (see TAB 3). The approach will enable the upgrade of existing assistant-category licences to professional category and permit new entrants to participate in the harvest based on a graduated, multi-year licensing process that builds on professionalization work by the industry.

The Department will continue with the approach applied over the previous two years to not announce TAC levels for the 2019 seal harvest, while closely monitoring harvest levels. The Department will explore a more ecosystem-based approach to managing seal populations that would take into account recovery efforts for key Atlantic fish stocks.

BACKGROUND

The Atlantic Seal Advisory Committee (ASAC), the primary consultative body for the seal fishery, met October 17th to discuss management measures for the 2019 fishery including total allowable catch (TAC) levels and the current freeze on commercial harp seal licences (see Record of Discussion at TAB 1). The Grey Seal Working Group met the day prior to ASAC, for discussion on specific regulatory, policy and management changes to advance the grey seal industry.

The commercial harvest of Northwest Atlantic harp and grey seals occurs between March and May in Atlantic Canada and Quebec. An overview of the seal fishery is provided at TAB 2. The commercial harvest of Atlantic seals (harp, grey and hooded) remains well within sustainable levels; recent landings represent a small fraction of previously announced TAC levels and most



recent science advice. A TAC was not announced for Atlantic seals in 2017 or 2018, although the fishery was closely monitored in relation to the most recent science advice.

In 2004, the Department implemented a freeze on the issuance of new commercial harp seal licences, as well as halted the upgrade of assistant-category sealers to professional category. The freeze was implemented to allow for professionalization of the fishery, including mandatory humane harvesting training. Formal proposals from Newfoundland & Labrador and Quebec industry representatives on an approach to address the freeze were reviewed at the ASAC meeting.

The number of commercial harp seal licence holders in Atlantic Canada and Quebec declined from approximately 13,000 in 2009 to 5,600 in 2017. Approximately 600 commercial licence holders actively participated in the harvest in 2017.

STRATEGIC CONSIDERATIONS

Discussion of harp seal TAC at the October ASAC meeting were limited in the absence of new science advice, which will not be available until fall in 2019. Industry does not accept 2016 science advice to lower the grey seal TAC for a population that they consider to be abundant and predatory on depressed groundfish stocks. Industry supports continuing the practice of not setting a TAC while closely monitoring harvest levels in relation to the most recent science advice. Given the abundance of stocks, this is a very low-risk approach that also limits negative reactions.

There is regional consistency among the Atlantic regions and Quebec on the approach to addressing the longstanding freeze on commercial harp seal licences and proceeding with a suite of multi-year process controls on licensing uptake. The rationale for this approach is based on industry professionalization achieved over the 15-year freeze period.

Mandatory humane harvesting training for commercial sealers was introduced in 2014 and fully achieved in 2016. This requirement, in conjunction with the two-stage licensing structure that advances active assistant sealers to professionals, are controls to moderate the uptake of new licences. All applications for new assistant licences will be considered based on eligibility criteria outlined in the seals chapter of *Commercial Fisheries Licensing Policy for Eastern Canada*, 1996.

Members of ASAC were supportive of an upgrade of existing assistant sealers to address the issue of aging professionals. The upgrade of existing assistant sealers (approximately 850 licence holders) to professional would not constitute a change in the total number of commercial licence holders. A downward trend in licence uptake is expected over time as the number of young harvesters entering the fishery is not likely to exceed those retiring given the physical demands and general low interest in this line of work among young people.

While the Committee feels that a reduction of seal populations is ideally achieved through market demand, the current demand for seal products is well below the maximum supply capacity in part due to bans instituted by trading partners. Members of ASAC are calling for increased efforts to re-open international markets.

SCIENCE ADVICE

For harp seals, the most recent advice (2014) suggested maximum removals of 325,000 animals. A population assessment was conducted in March 2017, with results not expected until late 2019. Science advice following a 2016 population assessment for grey seals suggested a maximum harvest of 34,500 seals. The last hooded seal science advice from 2006 suggested removals of up to 27,400 animals, landings have been minimal.

INDIGENOUS CONSULTATIONS

Indigenous partners participated in a supplementary advisory session in October, in addition to ASAC. Indigenous representatives supported permitting new entrants to join the commercial harp seal fishery in response to industry needs for new professional harvesters. Indigenous groups echoed the broader industry concerns about the impact of seal predation on fish stocks. They expressed a strong desire to cooperate with broader industry and showed notable interest in pursuing grey seal outfitter opportunities.

EXTERNAL CONSULTATIONS

Consultations have been carried out through seal fishery advisory committees (regional and national) and supplementary advisory meetings with representatives from Indigenous communities. The Grey Seal Working Group also met to discuss issues pertaining to this fishery.

ADVICE AND RECOMMENDATIONS TO MINISTER

DFO officials will inform ASAC of management decisions affecting the 2019 fishery that include allowing new commercial sealers to join the fishery and the upgrade of existing assistant category licence holders to professional category.

The Department will maintain the current approach to not announce TAC for Atlantic seal species for 2019, while closely monitoring harvest levels in relation to the most recent science advice. The Department will explore a more ecosystem-based approach to managing seals, to ensure harvest levels are in line with, and support, ongoing management action to rebuild prey fish stocks.

Catherine Blewett Deputy Minister	Kevin Stringer Associate Deputy Minister
Jonathan Wilkinson	
Minister	
Minister's Comments:	

Attachments: (3)

- 1) Atlantic Seal Advisory Committee: Record of Discussion (EKME# 3977201)
- 2) Overview of the Atlantic Seal Harvest (EKME# 3965289)
- 3) Memo to the ADM: Freeze on Commercial Harp Seal Licences (EKME# 3987009)



Fisheries and Oceans Canada Correspondence Routing Slip

Fiche d'acheminement de correspondance Pêches et Océans Canada

UNCLASSIFIED

GCCMS #: 2018-FHM-00393

EKME #: 3990321

To: Pour:	Catherine Blewett			Date:			
Object:	2019 MANAGEME	ENT MEASU	URES F	OR ATLANTIC	C SEA	<u>LS</u>	
From / De:	Adam Burns, Direc	tor Genera	I, Fishe	ries Resource	Manag	gement	
Via:	Sylvie Lapointe, A	ssistant Dep	outy Mir	nister, Fisheries	s Harb	our Ma	nagement
Autre(s)	al approvals: approbation(s): Material for the Mini Documents pour le			Your Signatu Votre signatu		X	Information
Remark Remarq	3		evelope	d in consultatio	n with	the foll	owing
Distribut	Serge Doucet,	lkenier, Reg Regional E rry, A/Regio	gional D Director	r General, Que irector Genera General Gulf F ector General,	I, Mari Region	itimes F	
Drafting Rédacte		ng Officer/ cteur: C.D'AOUST (613-447-8882)/ B.LESTER / D. Whorley / 0			ER / D.	Whorley / CH	

Gagnon, Marie (DGR)

De: Breton, Anne

Envoyé: 13 décembre 2018 09:27

À:

Cc: 'mariehelene.rondeau@aghamm.ca'; Lemire, Maryse; Wilkins, Kevin; Picard, Stéphane;

St-Laurent, Érick; Arseneau, Cédric; Leclerc, Caroline; Larochelle, Mia; Rivierre, Antoine;

Richard, Josée

Objet: TR: Demandes de la Première Nation Malécite de Viger dans le dossier du phoque de

l'Atlantique

Pièces jointes: phoque MPO.pdf; Lettre à M. Pierre Jenniss - 12 décembre 2018.pdf; Lettre à M. Pierre

Jenniss - 12 décembre 2018.pdf

Bonjour,

Vous trouverez ci-jointe la réponse de M. Patrick Vincent relativement à votre correspondance du 16 novembre dernier.

Anne Breton pour Patrick Vincent

Adjointe administrative, Direction générale régionale Pêches et Océans Canada / Gouvernement du Canada 104 Dalhousie, Québec QC Anne.breton@dfo-mpo.gc.ca / 418-648-4158 Administrative Assistant, Regional Director General's Office Fisheries and Oceans Canada / Government of Canada

De: Marie-Hélène Rondeau < mariehelene.rondeau@aghamm.ca >

Envoyé: vendredi 16 novembre 2018 3:38 PM

A: Vincent, Patrick

Cc: Gros-Louis, Denis; Larochelle, Mia; Picard, Stéphane; Leclerc, Caroline; St-Laurent, Érick; Rivierre, Antoine; Richard, Josée; Arseneau, Cédric; 'Pierre Jenniss'

Objet: Demandes de la Première Nation Malécite de Viger dans le dossier du phoque de l'Atlantique

Bonjour Monsieur Vincent,

À la demande de Monsieur Pierre Jenniss, Chef conseiller responsable des pêches commerciales à la Première Nation Malécite de Viger, je vous envoie ces deux lettres en lien avec la chasse au phoque gris et au phoque du Groenland.

Meilleures salutations,

Marie-Hélène Rondeau, M. Sc.

Coordonnatrice biologiste / Coordinator Biologist

Association de gestion halieutique autochtone Mi'gmaq et Malécite (AGHAMM)

Mi'gmaq Maliseet Aboriginal Fisheries Management Association (MMAFMA)

10. boulevard Perron, Gesgapegiag Qc G0C 1Y1

Bureau: 581-358-0024

Cell ·

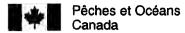
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Pêches et Océans Fisheries and Oceans

Canada

Direction générale régionale Région du Québec Regional Director General Office Quebec Region

Non classifié

Le 12 décembre 2018

Monsieur Pierre Jenniss Chef conseiller et directeur des pêches commerciales Première Nation Malécite de Viger 217, rue de la Grève, Cacouna (QC) GOL 1G0

Objet: Réponse à votre correspondance du 16 novembre 2018

Monsieur,

J'ai bien reçu votre correspondance du 16 novembre dernier concernant le dégel des permis commerciaux pour le phoque du Groenland et l'accès à la chasse aux membres de la Première Nation Malécite de Viger.

Je tiens d'abord à vous informer que les permis autochtones de quelques sortes que ce soit, commercial ou personnel, étaient déjà exempts du gel des permis de chasse au phoque qui était en vigueur depuis 2004.

En ce qui concerne votre question sur « l'interdiction de pêcher le phoque dans les eaux adjacentes à la côte de Gaspé, dans la province de Québec, en deçà ou du côté du rivage, de Pointe-au-Renard au phare du Cap-d'Espoir », en vertu de l'article 36 du règlement sur les mammifères marins (RMM), le fait que la zone en question s'étende au-delà des limites du Parc national Forillon et du Parc de Bonaventure s'explique par une volonté de considérer l'extension des sites de mise bas et d'alimentation.

Je tiens aussi à vous préciser que plusieurs autres zones (Parc du Bic, Côte du Nouveau-Brunswick dans le secteur de la Miramichi, etc.), sont toutes fermées, soit en vertu de du RMM, soit en vertu d'ordonnances de modification ou par condition de permis.

Le ministère fera une réévaluation de toutes ces fermetures de zones dans un avenir rapproché.

Je vous invite donc à poursuivre les discussions à ce sujet avec l'équipe de la Direction régionale de la gestion des pêches.

Veuillez accepter, Monsieur, mes salutations distinguées.

Patrick Vincent

Directeur général régional

Canadä

SEALS

SEAL HARVEST IN CANADA

- DFO ensures that the best available science is considered when making management decisions for seals and sea lions, with the goal of sustaining a healthy and productive aquatic ecosystem.
- Our government supports a sustainable, humane and well-regulated seal harvest in Atlantic Canada and Quebec.

Français

- [Le MPO veille à ce que les meilleures données scientifiques disponibles soient prises en compte dans les décisions de gestion des phoques et des otaries, dans le but de maintenir un écosystème aquatique sain et productif.
- Notre gouvernement appuie une chasse au phoque durable, sans cruauté et bien réglementée au Canada atlantique et au Québec.]

PACIFIC SEAL MANAGEMENT - PROPOSED COMMERCIAL FISHERY

- DFO will ensure that the best available science is considered when assessing proposals related to the commercial harvesting of Pacific seals and sea lions, with the goal of sustaining a healthy and productive aquatic ecosystem.
- Further science is needed to evaluate the impact of harbour seal and sea lion predation on Pacific salmon.
- The proposal review process will ensure that a wide range of biological, environmental, socio-economic and other factors are considered before proceeding with the establishment of a new fishery.
- We will utilize existing and emerging science to make appropriate policy decisions going forward.
- There are no plans to authorize a large-scale fishery or cull of seals or sea lions at this time.

Français

- [Le MPO veillera à ce que les meilleures données scientifiques disponibles soient prises en compte lors de l'évaluation des propositions relatives à la chasse commerciale de phoques du Pacifique et d'otaries, dans le but de maintenir un écosystème aquatique sain et productif.
- D'autres données scientifiques sont nécessaires pour évaluer l'incidence du phoque commun et de l'otarie sur le saumon Pacifique.
- Le processus d'examen des propositions garantira la prise en compte d'un large éventail de facteurs biologiques, environnementaux, socio-économiques et autres avant de procéder à la création d'une nouvelle pêcherie.
- Nous utiliserons les données scientifiques existantes et émergentes pour prendre les décisions stratégiques appropriées pour aller de l'avant.
- Il n'est pas prévu d'autoriser une pêche à grande échelle ou l'abattage de phoques ou d'otaries, pour le moment.]

ATLANTIC SEAL MANAGEMENT - GREY SEAL PREDATION ON COD

- The protection of our biodiversity and fish stocks is a priority for our government and we continue to put in place significant measures, in consultation with industry, to support the sustainability of our oceans.
- We are aware of concerns that the grey seals are impacting fish stocks like cod in the Southern Gulf of St. Lawrence.
- We will utilize existing and emerging science to make appropriate policy decisions going forward.
- We are helping the recovery of Southern Gulf cod by closing areas where cod spawn to fishing, restricting gear, and investing in scientific research.

 A government and industry working group has been established to promote and advance the sustainable and humane development of the grey seal fishery.

Français

- [La protection de notre biodiversité et de nos stocks de poisson est une priorité pour notre gouvernement et nous continuons à mettre en place des mesures importantes, en consultation avec l'industrie, pour soutenir la viabilité de nos océans.
- Nous sommes au courant que les phoques gris ont un impact sur les stocks de poissons, comme la morue dans le sud du golfe du Saint-Laurent.
- Nous continuerons d'utiliser les sciences existantes et émergentes pour une prise de décisions appropriée, à l'avenir
- Nous aidons au rétablissement de la morue du sud du Golfe en fermant des zones où la morue se reproduit, restreint les engins et investit dans les recherche scientifique.
- Un groupe de travail gouvernemental et industriel a été créé pour promouvoir et faire progresser le développement durable et humain de la pêche au phoque gris.]

ATLANTIC SEAL MANAGEMENT - FREEZE ON COMMERCIAL HARP SEAL LICENCES

 Fisheries and Oceans Canada has addressed a 15-year old restriction on the issuance of new commercial harp seal licences by implementing a set of graduated licensing controls with mandatory training requirements to ensure professionalism in the industry.

- The implementation of the graduated licensing regime with mandatory training and mentorship requirements has allowed the Department to normalize the licensing regime for the harvest.
- New commercial sealers can apply to join the fishery through an apprenticeship approach that includes a minimum period of participation as an assistant prior to becoming a professional harvester.

Français

- [Pêches et Océans Canada a levé le voile sur une restriction imposée depuis 15 ans à la délivrance de nouveau permis commercial de phoque du Groenland en mettant en place un ensemble de contrôles de permis graduelles assortis d'exigences de formation obligatoires pour assurer le professionnalisme de l'industrie.
 - La mise en œuvre du régime de délivrance graduelle de permis comportant des exigences obligatoires en matière de formation et de mentorat a permis au Ministère de normaliser le régime de délivrance de permis pour la récolte.
 - Les nouveaux chasseurs de phoque commerciaux peuvent demander à participer à la pêche grâce à une approche d'apprentissage qui comprend une période minimale de participation comme assistant avant de devenir professionnel.]

U.S. SENATE BILL 3119 (ENDANGERED SALMON PREDATION PREVENTION ACT)

 We are aware that U.S. President Trump has signed a Bill that amends the Marine Mammal Protection Act to provide more

- flexibility in the removal of individual sea lions on the Columbia River and its tributaries in order to protect threatened species of salmon.
- We will be closely monitoring activities carried out under the authority of this law and the required reporting on the impacts of sea lion removals on threatened salmon stocks over time.

Français

- [Nous savons que le président américain Trump a signé un projet de loi qui modifie la Marine Mammal Protection Act afin d'assouplir la procédure de retrait des otaries sur le fleuve Columbia et ses affluents pour protéger les espèces de saumon menacées.
- Nous surveillerons de près les activités menées en vertu de cette loi et les rapports requis sur les répercussions des retraits d'otaries sur les stocks de saumon menacés au fil du temps.]

Minister's Question Period Book

BACKGROUND

PACIFIC SEAL MANAGEMENT

- Among recent requests for population management action on the West Coast include:
 - First Nations Leadership Council (August 2018) has requested further study on the targeted management of seal and sea lion populations.
 - Pacific Balance Pinniped Society (October 2018) has proposed a commercial harvest of pinnipeds in B.C. as an "exploratory" fishery by First Nations and other licence holders.
 - Fur Institute of Canada met with the Minister's Chief of Staff in December 2018 to discuss the need to develop a long-term, sustainable management plan for B.C. seals and sea lions.
- DFO began conducting aerial surveys in British Columbia in the early 1970s to determine
 harbour seal and Steller sea lion abundance and distribution, and to monitor population
 trends; this work continues today. Population assessments for pinnipeds in the Pacific follow
 a 4-10 years schedule (depending on species and area covered). We are currently on target
 to meet those timelines.
- Harbour seal populations grew exponentially during the 1970s and 1980s but growth rates began to slow in the 1990s. The population now appears to have plateaued and stabilized in the Strait of Georgia index area (contains approximately 40% of the BC harbour seal population), and the rate of population increase has slowed elsewhere along the BC coast. Total population size from the latest census in 2008 was approximately 105,000 individuals. The increase is thought to represent the recovery of the population to historic norms, after depletion by over-hunting prior to the species being protected in 1970.
- Harbour seals are opportunistic predators that feed on a range of fish. Ongoing diet studies in the Strait of Georgia show that there they rely primarily on hake and herring, with salmon making up less than 10% of their overall diet (approximately 0.5-5% Chinook). The proportion of salmon in the diet varies by location, season and year, among other factors.
- Harbour seals are an important food source for transient killer whales, whose numbers have been increasing in inshore waters along the BC Coast in recent years. This population of killer whale has been listed as Threatened under the Species at Risk Act (SARA) since 2003.
 Pacific harbour seals have been assessed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) as "Not at Risk".
- Steller sea lion populations in BC waters have increased slightly beyond levels from the start
 of the time series (early 1900s), with the latest 2013 population estimate ranging from
 33,000-39,000 animals in the summer months, increasing to approximately 48,500 animals in
 winter.
- Previous research on Steller sea lions suggests that salmon comprise only about 10% of the
 overall diet, and the remainder is comprised of a wide variety of other species, some of
 which may potentially be prey, predators, or competitors with salmon.
- California sea lions do not breed in BC waters, but their range extends from Mexico to Alaska. Males tend to disperse north of Oregon, with numbers in the 1000's found in BC (mostly Salish Sea and west Vancouver Island) in the late fall to spring.

- Recent external research has been looking at possible relationships between pinniped abundance and Pacific salmon, but the conclusions drawn from these studies are based on the specific context and objectives of the study.
 - Chasco et al. (2017) suggest that in Puget Sound, WA, the increased abundance of three pinniped species may be adversely affecting recovery of threatened Chinook salmon and SRKW.
 - Nelson et al. (2018) found an inverse correlation between harbour seal densities and Chinook populations productivity for 14 of 20 wild Chinook populations in the Pacific Northwest, 8 of the 20 populations they looked at were Canadian Conservation Units (CUs).
 - Many assumptions/caveats with these external studies, e.g., very limited diet data and information on population structure went into the models, correlations are not evidence of causal effect.
- Further science is needed to evaluate the impact of seals and sea lions on Chinook salmon, and to determine whether any level of population management actions could result in a direct and measurable increase in Chinook salmon abundance. There are many other factors (e.g., disease, decreased habitat quality, climate change, predators other than pinnipeds), which could also contribute to salmon mortality.
- In Summer 2018, DFO's Pacific Region Pinniped Research Program started an expanded diet sampling program to obtain a more thorough understanding of pinniped (i.e. harbour seal, Steller sea lion) diets; however, this research program is not specifically designed to assess the impacts of pinniped predation on Chinook salmon.

ATLANTIC SEAL MANAGEMENT

- The Atlantic Seal Advisory Committee, the primary consultative body for the seal fishery, met October 17th to discuss management measures for the 2019 fishery including TAC levels and the current licence freeze.
- A sub-working group to ASAC, the Grey Seal Working Group met most recently in October to
 discuss issues specific to regulatory, policy and management changes that may advance the
 grey seal industry and subsequent product development.
- The most recent TAC levels announced for Atlantic seals were 400,000 for harp seals, 60,000 for grey seals and 8,200 for hooded seals.
- There were no TAC levels announced for the 2017, 2018 and 2019 Atlantic seal harvest; however, landings were actively monitored to ensure they respected the most recent science advice. Given recent harvest levels and market demand, landings are not expected to exceed the sustainable harvest levels recommended by DFO Science.
- For harp seals, the most recent advice (2014) suggested maximum removals of 325,000 animals. Science advice following a 2016 population assessment for grey seals suggested a maximum harvest of 34,500 seals. The last hooded seal science advice (2006) suggested that removals of 27,400 animals would be sustainable.
- The Department has addressed a 15-year old restriction on new commercial fishing licences for harp seals. In its place, the Department is implementing a set of procedural controls to

Minister's Question Period Book

ensure professional and humane harvesting through an apprenticeship approach with a mandatory training regime for all harvesters. As well, the Department will upgrade to the professional level assistant sealers who have been limited to participating as assistant sealer for the past 15-years. The freeze was implemented in 2004 to ensure the professionalization of the fishery, which has since been achieved.

- In 2007/2008 DFO Science evaluated effects of harp seals on fish stocks: (1) modelling results suggested harp seal predation was not a significant factor in the lack of cod recovery (2) although capelin (key food for cod) can be a significant part of harp seal diet, there is no evidence that harp seals negatively impact capelin populations.
- Capelin abundance is considered to be a more important factor influencing 2J3KL cod stock dynamics than harp seal predation.
- Since 2010, a number of reports have advised that grey seal predation is the greatest contributor to increased natural mortality of large cod in the Southern Gulf (4T).
- Grey seals consume 1.5-2 tons of food per year, almost entirely fish, such as sand lance, cod and other gadids, flatfish, herring, and skates.
- In the Southern Gulf of St. Lawrence, Grey seal predation on adult cod aggregated during Winter (54.5% of seal diet in these areas), inflicts high cod mortality. Most adult cod mortality is now from predation, and groundfish and skate mortality due to grey seal continues to increase.
- High grey seal predation has forced a redistribution of many groundfish species, into potentially less productive areas.
- The near-extinction of winter skate in Gulf appears to be due to grey seal predation.
- A 65% reduction of grey seal population would be needed in the Southern GSL to reduce the probability of local cod extinction to a low level.
- There is some evidence that Grey seal predation could also play a role in the dynamics of cod and other groundfish populations on the Scotian shelf.

U.S. SENATE BILL 3119

- The bill, Endangered Salmon Predation Prevention Act (Senate Bill 3119), was signed by President Trump and became Public Law (PL 115-329) on December 18, 2018.
- This law authorizes the National Oceanic and Atmospheric Administration to issue permits
 allowing eligible entities (including the states of Washington, Oregon and Idaho, and select
 tribes and bands) to capture and euthanize individual sea lions in a portion of the Columbia
 River or certain tributaries, in order to protect threatened species of salmon and other fish
 listed as endangered or threatened under the *Endangered Species Act* from sea lion
 predation.
- This law expands the entities eligible for NOAA-issued permits to include specific Tribes and authorizes the states of Washington, Oregon, and Idaho to enter into agreements with these tribes to control sea lion predation.
- This law also streamlines the process for eligible entities to remove sea lions by changing the
 eligibility criteria from a previously onerous and data-intensive process to geographic-based
 eligibility.
- The law requires the Secretary of Commerce to, no later than 3 years after enactment, study and report to Congress on the effects of deterrence and the lethal taking of sea lions

Department of Fisheries & Oceans

on the recovery of endangered and threatened salmon and steelhead stocks in the waters of the Columbia River and its tributaries.

• These amendments to the *Marine Mammal Protection Act* have no impact on the Department's efforts, in close collaboration with stakeholders, presently underway related to securing comparability findings from NOAA for Canadian fisheries that export product to the United States.

Nadeau, Simon (NCR)

De:

Kling, Ashley

Envoyé:

14 janvier 2019 15:00

À:

D'Aoust, Courtney

Cc:

Landry, Jean; Nadeau, Simon; Abraham, Christine

Objet:

RE: QP update due Jan 15

Pièces jointes:

MECTS-#3960683-v8-QP - Atlantic Seal Management MMSB.DOC

s.19(1)

Hi Courtney,

s.21(1)(b)

Just a few comments and suggestions on this Atlantic seal mgmt. QP note (attached).

Thanks and good luck on the seal QP note!

Ashley

From: Nadeau, Simon

Sent: January-14-19 12:48 PM

To: Kling, Ashley Cc: Landry, Jean

Subject: TR: QP update due Jan 15

De: D'Aoust, Courtney

Envoyé: 14 janvier 2019 11:54

À: Nadeau, Simon Cc: Abraham, Christine

Objet: RE: QP update due Jan 15

QP 2/3 for review: Atlantic Seal Management

I am still working on RM content, but wanted to give you as much time as possible to consider what Science points I added, *new content to Background is sourced from the recent Pinnipeds Deck for MINO briefing, regarding harp and grey seal predation.

Thanks for your input.

From: D'Aoust, Courtney

Sent: Monday, January 14, 2019 10:52 AM

To: Nadeau, Simon <Simon.Nadeau@dfo-mpo.gc.ca>

Cc: Abraham, Christine < Christine. Abraham@dfo-mpo.gc.ca>

Subject: QP update due Jan 15

Importance: High

Good morning,

We have been asked to update QP notes... including those related to seals. I am finalizing drafts and will share with you ASAP for your review and input please. I would like to provide to my director for approval by 10am tomorrow. Most are up to date and so I hope this won't be too time-consuming.

Note: Pacific seal predation was formerly grouped with the US Senate Bill topic. We are taking this opportunity to separate the two issues for a total of 3 QPs:

- -Atlantic seal management (includes licence freeze, cod predation)
- -Pacific seal management (harbor seal & sea lion predation)
- -US Senate Bill (now as a stand-alone topic)

I have plenty of recently updated Science materials and so will make a best effort to have them up to date for your attention.

Thanks,

Courtney D'Aoust

Fisheries and Aquaculture Management Officer |
Agent, Gestion des pêches et de l'aquaculture
Fisheries and Oceans | Pêches et océans
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Government of Canada | Gouvernement du Canada

Ministère des Pêches et des Océans

Livre pour la période des questions du ministre

ATLANTIC SEAL MANAGEMENT

- Our government supports a sustainable, humane and well-regulated seal harvest.
- We recognize the economic and cultural value of sealing to those Canadians who take part in it, including Indigenous groups, individuals and commercial harvesters.
- A small fraction of seal Total Allowable Catches hasve been harvested in recent years and the number of animals harvested continues to be well below-within sustainable levels.

Commenté [AK1]: Assuming this is referring to more than one species of seal, so there are multiple TACs and harvest

FREEZE ON COMMERCIAL HARP SEAL LICENSES

- The Department has undertaken consultations on the current licence freeze with harvesters from all areas of Atlantic Canada and Quebec and other interests at the October meeting of the Atlantic Seal Advisory Committee.
- A decision addressing the freeze is anticipated prior to the beginning of the 2019 harvest.

GREY SEAL PREDATION ON COD

 We are aware of concerns that the grey seals are impacting the recovery of some fish stocks, like cod in the Southern Gulf of St. Lawrence.

Commenté [AK2]: Saying 'fish stocks' is a bit to broad, as there is evidence of impacts on some groundfish stocks and sketes, but not 'all' fish stocks.

 We are helping taking action to support the recovery of Southern Gulf cod by closing areas where cod spawn to fishing, restricting gear, and investing in scientific research.

Commenté [AK3]: Suggest this change to make it cleare

 A government and industry working group has been established to promote and advance the sustainable and humane development of the grey seal fishery.

Page 1 of 3

Department of Fisheries & Oceans

Minister's Question Period Book

GESTION DU PHOQUE DE L'ATLANTIQUE

- Notre gouvernement appuie une chasse au phoque durable, sans cruauté et bien réglementée.
- Nous reconnaissons la valeur économique et culturelle de la chasse au phoque pour les Canadiens qui la pratiquent, notamment les groupes autochtones, les particuliers et les chasseurs commerciaux.
- Une petite fraction des captures totales autorisées de phoques a été récoltée au cours des dernières années et le nombre d'animaux récoltés reste bien inférieur au niveau soutenable.

GEL DE LA DÉLIVRANCE DE PERMIS COMMERCIAUX DE CHASSE AU PHOQUE DU GROENLAND

 Mon ministère entreprendra des consultations sur le gel sur la délivrance de permis auprès des pêcheurs de tous les secteurs du Canada Atlantique et du Québec et d'autres intérêts lors de la réunion d'octobre du Comité consultatif sur les phoques de l'Atlantique.

PRÉDATION EXERCÉE PAR LES PHOQUES GRIS SUR LES MORUES

- Nous sommes préoccupés par le fait que les phoques gris ont un impact sur les stocks de poissons, comme la morue dans le sud du golfe du Saint-Laurent.
- Nous aidons au rétablissement de la morue du sud du Golfe en fermant des zones où la morue se reproduit, restreint les engins et investit dans les recherche scientifique.
- Un groupe de travail gouvernemental et industriel a été créé pour promouvoir et faire progresser le développement durable et humain de la pêche au phoque gris.

Page 2 of 3

Department of Fisheries & Oceans

Minister's Question Period Book

BACKGROUND

- The most recent TACs announced <u>for Atlantic seals</u> were 400,000 for harp seals, 60,000 for grey seals and 8,200 for hooded seals.
- There were no Total Allowable Catch (TAC)TAC levels set announced for the 2017 and 2018 Atlantic seal harvest; however, landings were actively monitored to ensure they respected the most recent science advice. Given recent harvest levels and market demand, landings were not expected to (and did not) exceed the sustainable harvest levels recommended by DFO Science.
- The freeze on commercial harp seal licences that has been in place since 2004 prohibits
 the entry of new commercial licence holders and, does not allow for existing licensees to
 upgrade from assistant to professional licence category.
- Industry requests to lift the freeze stem primarily from an aging population of professionally licensed harvesters.
- The Atlantic Seal Advisory Committee, the primary consultative body for the seal fishery, met October 17th to discuss management measures for the 2019 fishery including TAC levels and the current licence freeze.
- A <u>sub-working group to ASAC</u>, meeting of the Grey Seal Working Group took placemet <u>most recently</u> in October to discuss issues specific to regulatory, policy and management changes that may advance the grey seal industry and subsequent product development.
- In 2007/2008 DFO Science evaluated effects of harp seals on fish stocks: (1) modelling
 results suggested harp seal predation was not a significant factor in the lack of cod
 recovery (2) although capelin (key food for cod) can be a significant part of harp seal
 diet, there is no evidence that harp seals negatively impact capelin populations.
- Capelin abundance is considered to be a more important factor influencing 2J3KL cod stock dynamics than harp seal predation.
- Since 2010, a number of reports have advised that grey seal predation is the greatest contributor to increased natural mortality of large cod in the Southern Gulf (4T).
- Grey seals consume 1.5-2 tons of food per year, almost entirely fish, such as sand lance, cod and other gadids, flatfish, herring, and skates.
- In the Southern Gulf of St. Lawrence, Grey seal predation on adult cod aggregated during Winter (54.5% of seal diet in these areas), inflicts high cod mortality. Most adult cod mortality is now from predation, and groundfish and skate mortality due to grey seal continues to increase.
- High grey seal predation has forced a redistribution of many groundfish species, into
 potentially areas potentially-less productive areas.
- The near-extinction of winter skate in Gulf appears to be due to grey seal predation.
- A 65% reduction of grey seal population would be needed in the Southern GSL to reduce the probability of local cod extinction to a low level.
- There is some evidence that Grey seal predation could also play a role in the dynamics of cod and other groundfish populations on the Scotian shelf.

Commenté [AK4]: Suggestion for Improved clarity.

Commenté [AKS]: Depending on how much detail you want, could add what the most recent sustainable harvest Science recommendations were, i.e. 325,000/year for harp seals and 34,500/year for grey seals. Could also add the most recent harvest levels to provide context on how low the harvests are relative to sustainable levels and TACs.

Commenté [DC6]: The points to follow were taken from recent Principeds Science deck used for MINO briefing Jan 11.

DISTRIBUTION Patrick Vincent, Regional Director General, Quebec Region Mary-Ellen Valkenier, Regional Director General, Maritimes Region Serge Doucet, Regional Director General Gulf Region Jacqueline Perry, A/Regional Director General, Newfoundland and Labrador Region Adam Burns Director General, Fisheries Resource Management Directeur générale, Gestion des ressources halieutiques

Security Cla sécurité	ssification - Classification de	
Non dassifié/Undassified		
Reference Ekme EKME # 4000909		
Date	JAN 2 5 2019	

Subject Objet

CONTROLS ON COMMERCIAL HARP SEAL LICENCES

In 2017, the Department received requests from Quebec and Newfoundland and Labrador industry to lift the long-standing freeze (since 2004) on commercial harp seal licences.

Assistant Deputy Minister Sylvie Lapointe has approved industry's proposal to allow new commercial sealers to join the fishery in 2019.

Licensing provisions for seals as set out in the Commercial Fisheries Licensing Policy for Eastern Canada, 1996 will apply. DFO will consider new applications for commercial assistant harp seal licences based on eligibility criteria outlined in this policy.

All new assistant licence holders must actively participate in the seal fishery under the supervision of a professional sealer for the two preceding years in order to be eligible for a professional licence.

CONTRÔLES SUR LES PERMIS COMMERCIALES DE PHOQUE DU GROENLAND

En 2017, le Ministère a reçu des demandes de l'industrie du Québec et de Terre-Neuve-et-Labrador pour lever le gel de longue date (depuis 2004) des permis commerciaux de pêche au phoque du Groenland.

La sous-ministre adjointe, Sylvie Lapointe, a approuvé la proposition de l'industrie de permettre à de nouveaux phoquiers commerciaux de prendre part à la pêche en 2019.

Les dispositions relatives à la délivrance des permis de pêche au phoque énoncées dans la Politique d'émission des permis pour la pêche commerciale dans l'Est du Canada - 1996 s'appliqueront. Le MPO étudiera les nouvelles demandes de permis commercial d'aidechasseur de phoque du Groenland en fonction des critères d'admissibilité énoncés dans la présente politique.

Further, assistant licence holders as of December 31, 2018 will be upgraded to the professional licence category for the 2019 fishery. This upgrade will be reflected on an amended licence accessible through the online licensing system.

Please ensure that all Resource Management, Conservation and Protection, and Licensing staff are advised accordingly. Tous les nouveaux titulaires de permis d'aidechasseur doivent avoir participé activement à la chasse au phoque sous la supervision d'un chasseur professionnel au cours des deux années qui précèdent afin d'être admissibles à un permis professionnel.

De plus, à compter du 31 décembre 2018, les titulaires de permis d'aide-chasseur seront reclassés dans la catégorie des permis professionnels pour la pêche au phoque de 2019. Cette mise à niveau apparaîtra sur un nouveau permis accessible par l'intermédiaire du système d'émission de permis en ligne.

Veuillez vous assurer que tout le personnel chargé de la gestion des ressources, de la conservation et de la protection, et de la délivrance des permis est informé en conséquence.

Adam Burns

Director General, Fisheries Resource Management Directeur générale, Gestion des ressources halieutiques

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Gauthier, Marylène (DFO)

De:

Vincent, Patrick

Envoyé:

28 janvier 2019 09:43

À:

Lemire, Maryse

Cc:

Pelletier, Sylvie; Couturier-Dubé, Geneviève; Bois, Lucie

Objet:

TR: 2018-FHM-00392 Controls on Commercial Harp Seal Licences_FHM ADM approved

memo

Pièces jointes:

MECTS-#4013782-v1-2018-FHM-00392

__Controls_on_Commercial_Harp_Seal_Licences_FHM_ADM_approved_memo.TIF

Catégories:

MARYSE ACTION

Bonjour Maryse,

Pour votre information.

Marie Gagnon, pour/

Patrick Vincent

Directeur général régional

Pêches et Océans Canada – Région du Québec / Gouvernement du Canada

Patrick.Vincent@dfo-mpo.gc.ca / Tél.: 418-648-4158

Regional Director General

Fisheries and Oceans Canada – Quebec Region / Government of Canada

Patrick.Vincent@dfo-mpo.gc.ca / Tél.: (418) 648-4158

De: lacovitti, Michelle < Michelle.lacovitti@dfo-mpo.gc.ca>

Envoyé: 25 janvier 2019 14:14

À: Bois, Lucie <Lucie.Bois@dfo-mpo.gc.ca>; Curlett, Karen A <Karen.Curlett@dfo-mpo.gc.ca>; Hébert, Linda M <Linda.Hebert@dfo-mpo.gc.ca>; Butler, Annette <Annette.Butler@dfo-mpo.gc.ca>

Cc: Gagnon, Marie (DGR) < Marie. Gagnon@dfo-mpo.gc.ca>; Couturier-Dubé, Geneviève < Genevieve. Couturier-

Dube@dfo-mpo.gc.ca>; DFO.F FHM ADM Correspondance / Correspondance SMA GPP F.MPO

<DFO.FFHMADMCorrespondance-CorrespondanceSMAGPPF.MPO@dfo-mpo.gc.ca>

Objet: 2018-FHM-00392 Controls on Commercial Harp Seal Licences_FHM ADM approved memo

Good afternoon

Please be advised that Sylvie Lapointe has approved this memo and is being sent for your information.

Thanks

Michelle Iacovitti

Fisheries and Harbour Management GCCMS Coordinator ADM's Office 13W077 613-990-1372

No information has been removed or severed from this page



Fisheries and Oceans Canada Correspondence Routing Slip

Fiche d'acheminement de correspondance Pêches et Océans Canada

> UNCLASSIFIED GCCMS #: 2018-FHM-00392 EKME #: 3987009

To:			
Pour:	Sylvie Lapointe	Date:	
Object:	CONTROLS ON C	OMMERCIAL HARP SEAL LICENCES	
From / De:	David Whorley, Di	rector, Fisheries Resource Management Ope	erations
Via:	Adam Burns, Direc	ctor General, Fisheries Resource Manageme	
	nal approvals: approbation(s):	Sylvie Lapointe Assistant Deputy Minister Fisheries and Harbour Management	
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Drafting Rédacte	Officer/C.	D'AOUST (613-447-8882)/ B. LESTER / D. \	WHORLEY / CH



Fisheries and Oceans

Pêches et Océans Canada

Canada

Fisheries Resource Management Gestion des ressources halieutiques

Director General

Directeur général

<u>UNCLASSIFIED</u> 2018-FHM-00392 EKME #: 3987009

MEMORANDUM FOR THE ASSISTANT DEPUTY MINISTER

CONTROLS ON COMMERCIAL HARP SEAL LICENCES (FOR DECISION)

SUMMARY OF ADVICE TO ASSISTANT DEPUTY MINISTER

This note seeks your approval on a consensus industry proposal to address the 15-year freeze on commercial harp seal licences, and rely on a set of process controls (TAB 1).

The recommended approach would enable the upgrade of existing assistant-category licences to professional category and permit new entrants to participate in the harvest based on a graduated, multi-year licensing process to build on professionalization of the industry. Licence totals by region and licence type are available in TAB 2.

In addition, this note seeks your approval to continue with the approach applied over the previous two years to not announce total allowable catch (TAC) for the 2019 seal harvest while closely monitoring harvest levels. The Department will explore a more ecosystem-based approach to managing seal populations that would take into account recovery efforts for key Atlantic fish stocks.

To allow for operational preparations in advance of the 2019 fishery, your decision is requested by January 8, 2019. Communication lines will be prepared.

BACKGROUND

The commercial harvest of Northwest Atlantic harp and grey seals remains well within sustainable levels. Recent landings represent a small fraction of previously announced total allowable catch (TAC) levels and most recent science advice. A TAC was not announced for Atlantic seals in 2017 or 2018, although the fishery was closely monitored in relation to the most recent science advice.

In 2004 at the request of industry, the Department implemented a freeze on the issuance of new commercial harp seal licences, as well as halted the upgrade of assistant-category sealers (requiring supervision) to professional category (independent harvester). The freeze was implemented to ensure professionalization of the fishery, including mandatory humane harvesting training (see Memorandum to the Minister at TAB 1).

Canadä

.../2

The Commercial Fisheries Licensing Policy for Eastern Canada (CFLPEC), 1996 outlines the licensing structure for seals including licence categories and eligibility criteria. As per this policy, assistant sealers can only participate under the guidance of a professional sealer. Many of the current professional-level harvesters – in light of the 15-year freeze – have been renewing their licences and nominally participating in the harvest for the sole reason of supervising assistant-level harvesters restricted from upgrade.

Departmental policy prohibits re-issuance of an existing commercial sealing licence to a new sealer (non-transferrable licence). Upgrading of long-frozen assistants to professional is expected to facilitate the exit of aging current professional harvesters, and may contribute to improved occupational health and safety in this activity.

The number of commercial harp seal licence holders in Atlantic Canada and Quebec declined from approximately 13,000 in 2009 to 5,600 in 2017. A breakdown of licence totals by region and licence category are available in TAB 2. Approximately 600 commercial licence holders actively participated in the harvest in 2017.

Formal proposals from Newfoundland & Labrador and Quebec industry representatives on an approach to address the freeze were reviewed at the Atlantic Seal Advisory Committee (ASAC) meeting in October 2018. The proposals are driven in part by an aging population of professionally licensed harvesters, and the need for new professional harvesters.

STRATEGIC CONSIDERATIONS

Industry does not accept 2016 science advice to lower the grey seal TAC for a population that they consider to be abundant and predatory on depressed groundfish stocks. Industry has harvested about 1,600 grey seals per year in recent years, which is well below the sustainable harvest level recommended by Science of 34,500 animals. Hooded seal landings have been less than 100 per year in recent years. Harp seal harvests are also well below the previous TAC of 400,000 animals (60,000 to 81,000 harvested in recent years), as well as the sustainable harvest level recommended by Science of 325,000 animals. It is unlikely that 2019 harp seal removals will increase beyond recent removals based on current market demand.

Industry supports continuing the practice of not setting a 'TAC while closely monitoring harvest levels in relation to the most recent science advice. Given the abundance of stocks, this is a very low-risk approach that also limits negative reactions.

There is regional consistency among the Atlantic regions and Quebec on an approach to addressing the longstanding freeze on commercial harp seal licences and proceeding with a suite of process controls on licensing uptake. The rationale for this approach is based on industry professionalization achieved over the 15-year freeze period.

Mandatory humane harvesting training for commercial sealers was introduced in 2014 and fully achieved in 2016. This requirement, in conjunction with the two-stage licensing structure that advances active assistant sealers to professionals, are controls to moderate the uptake of new licences. All new applications for assistant licences will be considered based on eligibility criteria outlined in the seals chapter of Commercial Fisheries Licensing Policy for Eastern Canada,

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1996. The Department is working to develop a mechanism to confirm two years of active participation by new assistant sealers prior to future licence upgrade.

Members of ASAC were supportive of an upgrade of existing assistant sealers to address the issue of aging professionals. The upgrade of existing assistant sealers (approximately 850 licence holders) to professional would not constitute a change in the total number of commercial licence holders.

The Department is unable to support the Canadian Sealers Association (CSA) proposal to modify licensing policy in the Newfoundland Region requiring membership with the CSA to be a participant, given the obvious limitations on freedom of association that this approach would require. Not introducing such a requirement is consistent across the regions, and does not inhibit harvesters who might wish to join the CSA.

A downward trend in licence uptake is expected over time as the number of young harvesters entering the fishery is not likely to exceed those retiring given the physical demands and general low interest in this line of work among young people.

SCIENCE ADVICE

For harp seals, the most recent advice (2014) suggested maximum removals of 325,000 animals. A survey of the population was conducted in March 2017, with results not expected until fall 2019. Science advice following a 2016 population assessment for grey seals suggested a maximum harvest of 34,500 seals. The last hooded seal science advice from 2006 suggested that removals of 27,400 animals would be sustainable, although this advice should be taken with caution given the uncertainty around how this population may have evolved over the last 12 years.

INTERDEPARTMENTAL CONSULTATIONS

No interdepartmental consultations were required.

INDIGENOUS CONSULTATIONS

Indigenous partners participated in a supplementary advisory session in October, in addition to ASAC. Indigenous representatives supported permitting new entrants to join the commercial harp seal fishery in response to industry needs for new professional harvesters. Indigenous groups echoed the broader industry concerns about the impact of seal predation on fish stocks.

EXTERNAL CONSULTATIONS

ASAC, the primary consultative body for the seal fishery, met October 17th to consult on the licence freeze and TAC levels for 2019.

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ADVICE AND RECOMMENDATIONS TO ASSISTANT DEPUTY MINISTER

It is recommended that you approve industry's proposal to allow new commercial sealers to join the fishery based on a set of graduated, multi-year licensing controls, and that you approve the upgrade of existing assistant category licence holders to professional category.

In addition, it is recommended that you maintain the current approach of not announcing a TAC for harp, grey and hooded seal fisheries for 2019, while actively monitoring harvest levels in relation to the most recent science advice. The Department will explore a more ecosystem-based approach to managing seals, to ensure harvest levels are in line with, and support, ongoing management action to rebuild prey fish stocks.

Following your approval, an information note will be sent to the Minister informing him of your decisions. DFO officials will inform ASAC of these management decisions affecting the 2019 fishery.

Stagaite	JAN 2 5 2019
Sylvie Lapointe	
Assistant Deputy Minister	
I concur with the recommer	ndations
I do not concur with the rec	ommendations

Attachment(s): (2)

- 1) (2004) Memo to the Minister: Requests for Grey Seal and Blueback Harvests, Licence Freeze and Increased Harp Seal TAC (EKME # 400692)
- 2) Breakdown of licence totals according to region and licence category (EKME #3990452)

May 31, 2004

Memo to the Deputy Minister:

The Minister Signed this memo with the Following remarks:

s.21(1)(a)

- 2) Note that the memo From you on May 18 re: grey seals (attached) (2004-201-00127) has overtaken advice on this memo;
- 3) Agrees with all other recommendations.

Jeff MacDonald Jeff MacDonald Senior Policy Advisor.

2004-009-00386 EKME: 405664

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To: Larry Murray À:	Date:
Subject:	and Bluchack Harvests, Licence
	and Blueback Harvests, Licence
Freeze and Increased Harp Seal	IAC.
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From/De: A/DG R	\sim
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Via: David Bevan, A/ADM	MAR 2 3 2004
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For Comments/Pour commentaires	Material for the Minister/Documents à
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Drafting Officer / Rédacteur : D. Pearcey/	K. Jones/B. Rashotte ADD RM/D. Rivard/
NS. Labonté/W. Watson-Wright/L. F	ay/M. King/D. Beyarr
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Gouvernement du Canada Pêches et Océans

MECTS - SSCMHG: 2004-009-00386

To: / À :	Larry Murray	Date :	
Subject: / Objet :	IMPACT ON PRICES IF HARP SEAL QUOTA WERE INCREASED		
	•		
	·		
From / De :	Lori Ridgeway		
Via:	Matthew King / David Bevar		
		19636×	
For Signal	gnature / Pour Signature	x Information	
For Co	omments / Pour commentaires	Material for the Minister / Documents à l'intention du ministre	
current requests for increased seal quotas. Agriculture Canada (Market and Industry Ser		ces for harp seal products, as well as regarding seal quotas. Industry Services Branch) was contacted and	
	provided information regarding	the prospects for the 2004 seal products market.	
Drafting Office	cer / Rédacteur : B. Bouchard (9	93-3109)/S. Leslie/R. Elliott	

X:/EPA/Economic Analysis/Memo Min impact increase harvest seals Feb 04.doc



s.21(1)(a)

Fisheries and Oceans

Canada

Pêches et Océans

Canada

Deputy Minister

Sous-ministre

MAR 3 0 2004

2004-009-00386 EKME # 405664

MEMORANDUM FOR THE MINISTER

REQUESTS FOR GREY SEAL AND BLUEBACK HARVESTS, SEAL LICENCE FREEZE AND TOTAL ALLOWABLE CATCH INCREASES

(Decision sought)

SUMMARY

- The Atlantic Seal Harvest Plan 2003-2005 was implemented based on extensive consultations with the sealing industry. The plan allows industry the flexibility to react to market fluctuations while still ensuring sound conservation measures.
- Some industry members have requested that there be amendments to the existing Seal Harvest Plan
 to enable the harvest of grey seals, bluebacks and increased quotas for harp seals. There has also
 been a request for a licence freeze for commercial and personal use seal licences with the exception
 of the Quebec Lower North Shore (LNS), grey seals, and Aboriginal licences.
- Scientific data on grey seals is currently considered deficient. The Atlantic Seal Research Project is currently underway and the population, diet and management controls for grey seals are being studied this year.
- It is recommended that you refrain from making any final decision regarding the potential commercial harvest of grey seals until the Department of Fisheries and Oceans (DFO) has prepared further advice on this issue.
- The establishment of a blueback hunt will require changes to the *Marine Mammal Protection Regulations (MMR)* and a Memorandum to Cabinet (MC) to reverse a 1987 Cabinet Policy decision prohibiting the hunt for these animals.
- Seal licences for 2004 have already been issued and it is not viable to implement a freeze for this
 year's hunt without negatively impacting some sealers at the expense of others.
- Increasing the level of harvest for harp seals will come at the expense of industry consultations and advice.
- It is recommended that a one-year licence freeze for seals be implemented and announced effective June 1, 2004, following completion of this year's seal hunt, and that the existing Total Allowable Catch (TAC) for harp seals remain in place until further consultations are conducted.

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Background

- The 2003-2005 Atlantic Seal Hunt Management Plan was announced in February 2003. This plan contains the major management measures governing the hunt, including a three-year 975,000 harp seal TAC and a 10,000 hooded seal TAC. Grey seals have never been harvested in large numbers for commercial use and no TAC has been established. Over the past two years, fewer than 200 animals have been harvested.
- The multi-year management approach was introduced to provide stakeholders with a greater certainty in planning their activities. The timeframe of the plan coincides with the availability of new survey data on all three primary seal species, which should be completed by 2006.

Requests for a grey seal harvest

- The grey seal population in Atlantic Canada has been as low as 8,000 animals in the early 1970s. Over the last three decades, their numbers have increased to over 195,000 in 1997, when they were last surveyed.
- Grey seals breed on Sable Island, on small islands and on the ice floes in the Southern Gulf of St. Lawrence, the eastern shore of Nova Scotia, and in the New England States from early December to early February. After breeding, they disperse mainly over the Scotian Shelf and into the Gulf of St. Lawrence, and to a lesser extent off the southern coast of Newfoundland and Georges Bank.
- Using the data from the 1997 population survey, projections estimate that the herd on Sable Island has been growing and may have more than doubled, but the Gulf herd has declined by 33%.
- Sealing for this species has been limited to a small traditional commercial hunt in an area
 off the Magdalen Islands, and to commercial hunts of small numbers in other areas,
 excluding Sable Island where no hunting is permitted.
- In the past, only a small number of grey seals have been hunted each year and a TAC has not been established.
- In 1998, the Nova Scotia Department of Fisheries and Aquaculture sponsored a grey seal
 project with the North of Smokey Sealers Co-op Ltd. The intent of this project was to
 develop a commercial grey seal harvest. For a number of reasons, including lack of
 markets, this project was terminated. Since this time, commercial sealers have taken
 approximately 820 grey seals (averaging less than 200 per year).
- Industry research continued on markets for grey seal products, indicating that the meat and oil derived from the blubber of grey seals was as good, if not better, than that of harp seals.
- In the past two years, there has been a concerted effort to obtain a TAC for grey seals to pursue further market development of grey seal products and control population levels.

• Two primary groups have shown an interest in harvesting grey seals commercially.

s.20(1)(c) s.21(1)(b)

Representatives from these two groups were present at industry consultation meetings
held in early December 2003 where other industry and provincial representatives
expressed interest in participating in any working group involving the development of the
grey seal hunt. Recommendations from these consultations were that the proponents
work together with other interested parties in developing a harvesting plan for submission
to DFO.

- Maritimes Region officials have reviewed this proposal and have indicated that, while DFO is supportive of the initiative, funds are not available to support the project. In terms of harvest levels, DFO is hesitant to give an opinion as to what the total grey seal removal level should be and is awaiting an indication from industry as to what age class of seals is to be targeted. In addition, until the analysis of this season's survey for the grey seal population is completed later this year, the present information should be considered data-deficient. It was recommended that industry undertake some interim initiatives, including the development of harvesting strategy, identification of the target age class(es), product development, areas of harvest operations, and methods of handling and transportation of carcasses.
- The Fisheries Resource Conservation Council (FRCC) released its report on Scotian-Shelf groundfish stocks on February 13, 2004, indicating that they "support recent proposals to develop a limited harvest of grey seals." They also note that "a sustainable hunt could limit further growth of the population, or perhaps lead to some reductions in the numbers, thereby limiting or reducing the predation impact on fish by grey seals."
- More recently (March 9, 2004), the Province of Nova Scotia has indicated in various media publications that they support a harvest of grey seals.

Request for a blueback harvest

- In October 1983, the Council of European Communities (EC) issued a directive banning the import of skins from whitecoats and bluebacks.
- In 1986, the Royal Commission on Seals and the Sealing Industry in Canada (the Malouf Report) concluded that the hunt for whitecoats and bluebacks should not be permitted, and that adoption of this recommendation would make sealing in Canada consistent with the intention of the EC directive.
- Both the EC and the Malouf Commission made their distinction of a blueback on the basis of the skin rather than the age of the animal.
- On December 30, 1987, former Minister Siddon adopted the same distinction when he announced a Cabinet Policy withdrawing permission for commercial whitecoat and blueback hunting.
- In February 1993, the MMR were established and included the prohibition on the sale, trade or barter of bluebacks. Under these regulations (s. 2), whitecoats and bluebacks continued to be defined as seals that have not moulted their white and blue coats.
- The first post-natal moult of hooded seals typically occurs at 15 or 16 months of age, and until this first moult a hooded seal has the same pelt it was born with. After this first moult, hooded seals undergo an annual moult. Some individual seals lose the blueback pelt after their second moult (approximately 27 months), while others may maintain it until they are approximately 39 months old.
- In 1995, Minister Tobin approved proposed amendments to the *MMR*, including extending the prohibition on the sale, trade or barter of whitecoats and bluebacks to include the harvest of these animals. This amendment package was delayed pending work to revise the *Fisheries Act*.
- In 1996, a number of sealers were charged with selling blueback seals contrary to s. 27 of the MMR. Work on amending the MMR was delayed at that time due to judicial questions of federal legal power (R. v. Ward).
- In 1998, DFO consulted extensively on the issue of a blueback hunt and it was recommended that the regulations be amended to allow the sale of bluebacks, and that the hunt be closed for these animals until the vast majority were weaned.
- In 1999, the Newfoundland Court of Appeal ruled on R. v. Ward, concluding that s. 27 of the MMR (buy, sell, barter) was beyond the legal power of the federal government and therefore invalid.
- DFO filed its notice of application for leave to appeal this decision in 2000, and on February 22, 2002, the Supreme Court unanimously ruled in favour of the federal government; meaning that DFO could continue to enforce the regulations as written.

- Blueback pelts can demand a high price (\$60-\$70) depending on market conditions, and industry has lobbied on several occasions to have the regulations and Cabinet Policy Decision changed to allow sealers to take bluebacks at the same age as whitecoats (once weaned).
- Industry has coined the term "hopper hood", which is meant to refer to a blueback seal that is one year old, but has not yet moulted its blueback coat, in an attempt to distinguish the age of a blueback seal. This term is not used in the marine science community to describe hooded seals.
- A hooded seal survey is planned for early 2005 under the Atlantic Seal Research Project. Results should be available in time for the 2006 season.

Request for a Licence Freeze

- During the December 2003 consultations, seal industry members requested a freeze
 on all commercial and personal use seal licences to allow them a one-year timeframe
 in which to review access controls (professionalization) to keep the hunt stable and
 profitable.
- This request received majority support from industry members, but came with the
 caveat that commercial and personal use seal licences continue to be issued for grey
 seals (to allow for market development), Aboriginals, and fishers from the Quebec
 LNS (to allow for increased access to both of these groups).

Request for a TAC Increase of 180,000 Harp Seals

s.20(1)(c)

s.21(1)(b)

 Some industry members have been requesting access to increased numbers of harp seals to facilitate development of infrastructure in various locations of Atlantic Canada.



- Your office has requested information regarding the potential market and scientific impact of a harp seal TAC increase of 180,000 animals.
- There are four seal buyers/processors in Newfoundland and Labrador (NL), one in Prince Edward Island (PEI) and one in the Magdalen Islands. In 2003, 95% of the total seals harvested were landed in NL.
- The seal hunt provides income to an estimated 12,000 sealers in Eastern Canada. According to the Canadian Sealers Association, the 2002 hunt contributed an estimated \$48 million to the regional economy in product sales and indirect economic spin-offs.

• Seal products include pelts, flippers, meat, oil and organs. Traditionally, the pelts have been the main commodity, but production of seal oil for human consumption has grown substantially in recent years. The market is considered strong for pelts, while oil, meat, flippers and organs have a saturated or limited market.

Analysis / DFO Comment

Requests for a grey seal harvest

- Any requests for exclusive rights to harvest seals have not been approved in the past, based on industry consultations and the need to maintain a competitive seal industry.
- DFO's existing mandate does not facilitate funding for market development or industry
 infrastructure. The existing \$6 million for science research has been fully allocated to the
 Atlantic Seal Research Project, which will focus on population assessments for grey, harp
 and hooded seals, seal distribution and diet analysis, and evaluation and implementation
 of seal management tools to aid in the recovery of Atlantic cod stocks.
- Given the extremely low population of grey seals in the 1970s, the fact that there are two distinct populations of grey seals (one increasing and one declining based on the last science conducted), and that these populations intermingle at different times of the year, it is imperative that the ongoing scientific population survey be finalized before any decision can be made on a substantial grey seal harvest.
- However, a hunt of 5,000-10,000 animals over two years could be risk managed while this survey is being undertaken. It should be noted however, that this goes against the advice provided by Science in 1997 indicating that only a small harvest of 2,000 animals could be permitted given the conditions at that time. No new information has been made available for the population.
- Hunting for grey seals on Sable Island will be extremely difficult given the harsh environment, the Island's status as a federal Migratory Bird Sanctuary administered by the Canadian Wildlife Service, and the fact that the Island is protected under the Sable Island Regulations, administered by the Department of Transport.
- Grey seal oil and meat may be of high quality, but the markets for these products are saturated and there is little room for more without further market development or product differentiation.
- It is important that the harvest of grey seals not be perceived as a cull. This will be detrimental to the public image of the overall seal hunt, and will have negative impacts on markets and public opinion.
- It is equally important that any harvest of grey seals not be viewed as being subsidized by the federal government. The International Fund for Animal Welfare (IFAW) and other environmental groups have used this type of information effectively as leverage in their anti-sealing publicity campaigns in the past.

- To ensure this does not happen, DFO is working closely with industry members interested in pursuing the development of a grey seal harvest, but data on grey seal populations is currently deficient.
- DFO is conducting a grey seal population survey this year and collecting information on their diet and distribution. The results of this work will give us a better understanding of the ecosystem in which seals and fish interact.

Request for a blueback harvest

- One problem that the "hopper hood" definition poses is an inability to distinguish the
 age of a blueback seal by its pelt alone. If blueback pelts are landed and inspected, it
 will be difficult to distinguish whether or not the animal harvested was weaned, or
 how old it is.
- Industry has often used the argument that Norway harvests bluebacks with very little public opposition. In Norway there are no more than three vessels harvesting blueback seals in the Greenland Sea, and each vessel carries a government inspector to ensure that hunted seals have been weaned. It is impractical to put an observer on each vessel participating in the seal hunt in Canada.
- The Eminent Panel on Seal Management (the Panel) expressed the view that "an appropriate opening date for the hooded seal hunt can be chosen that will ensure that no "baby" hooded seals are taken, without resorting to a complete ban on the hunting of bluebacks."
- Any opening date for a hunt of bluebacks would have to be in early April to ensure that all pups are weaned.
- The Panel went on to recommend that no regulatory or policy change be made until a new aerial survey of the hooded seal population has been completed, noting a change would most certainly result in the taking of the current TAC for hooded seals.
- This opinion was substantiated by most participants involved in the 2002 Seal Forum. The majority of participants felt that "the hooded seal ought to be considered a "data poor" species, and that a population assessment ought to be undertaken without delay." Notwithstanding this, most stakeholders agreed that "the extended protection for bluebacks ought to be lifted, provided:
 - O A population survey confirmed anecdotal evidence of the state of the herd that would sustain such a hunt, and
 - o The hunt is properly managed through the establishment of opening dates that ensure animals are weaned and rules are clear about whelping patch entry."
- The hooded seal population survey will not be concluded until 2005.

- To facilitate a blueback hunt, changes would be required in the MMR (redefining a blueback seal based on age, and allowing the sale, trade and barter of these animals). An MC would also be required to reverse the 1987 Cabinet Decision and allow for the harvest of these animals. Both these actions may require extensive consultations, which will indicate Canada's intent to pursue a blueback hunt.
- The Department of Foreign Affairs and International Trade (DFAIT) has indicated that their strongly held view is that allowing for the hunting of bluebacks would damage Canada's reputation as a modern, environmentally-friendly and compassionate society and that a decision to expand the seal hunt to include bluebacks will cause strong and negative reactions in the United States (U.S.) and Europe.
- The reinstatement of a blueback harvest will also impact on Canada's attempts to gain access to U.S. markets under the existing 1972 Marine Mammal Protection Act (MMPA).
- The maximum direct economic benefit that can be derived from a blueback hunt, if pelts are valued at \$70 and the TAC remained at 10,000, would be \$700,000. A larger TAC might be possible once the survey is completed. In comparison, the potential direct value of the harp seal hunt (based on last year's markets) is \$50 x 350,000 animals = \$17,500,000. Unless the issue is properly managed, the impacts on existing markets for harp seal pelts could be devastating in the event a blueback hunt is permitted.

Request for a Licence Freeze

- The number of commercial (professional and assistant) and personal use seal licences has not risen drastically over the past nine years. A table outlining the total number of seal licences issued since 1995 has been attached for your review (TAB 1).
- A one-year licence freeze as proposed by industry, with the caveats outlined for grey seals, Aboriginals and the Quebec LNS, is not deemed harmful at this point in time.
- The licence freeze will allow industry the necessary time to evaluate the hunt and determine the viability of existing sealers.
- Licences for the 2004 season have already been issued, and the hunt is slated to commence in the Gulf in the very near future. Implementing a licence freeze for this season would be construed as discriminatory to NL sealers who have not yet obtained their licences for the front, scheduled to open around April 12, 2004.
- Implementing and announcing a licence freeze effective June 1, 2004, following the completion of this year's hunt, should achieve the desired results without prejudice against those who have already received licences for this season.

Request for a TAC Increase of 180,000 Harp Seals

- The results of the December 2003 consultations clearly indicated that industry was not supportive of any exclusive rights to harvest seals. This was viewed as a method of ending the competitive nature of the existing hunt, and putting the viability of existing sealers in question.
- Due to data limitations, it is impossible to say whether the harp seal would be devalued should the harvest be increased, but the Panel on Seal Management (2001) noted "many of the sealers whom the Panel met indicated that they would be reluctant to take more seals than the current TAC, because they feared this could swamp the market and reduce pelt prices."
- Mink pelt sales are the indicator for the world price on fur and, according to Agriculture Canada (Market and Industry Services Branch), indications are that the seal market could be very strong for 2004.
- The seal hunt is managed on the basis of control rules and reference points (objective based fisheries management), which were consulted on extensively and agreed upon in 2002 with all industry members.
- Based on these consultations, the 2003-2005 seal management plan contains reference points at 70% (3.85 million), 50% (2.75 million) and 30% (1.65 million) of the maximum observed size of the harp seal herd (5.5 million).
- If market and environmental conditions result in the full TAC being taken over the existing three-year plan (975,000 seals), it is estimated that the population would decline to about 4.7 million by 2006, well above the 70% threshold committed to in the plan.
- Harvest simulations were run in 2002 to provide advice for the 2003-2005 Seal Management Plan. One of the simulations was done using an annual harvest of 500,000 for three years (returning to a harvest of 275,000 following the plan). This scenario indicated that a harvest at this level would yield a sharp decline in the seal population, from 5.3 million in 2003 to 4.0 million by 2006. The replacement harvest after three years under this scenario would be 175,000 animals. This means that a TAC for harp seals could not be set above 175,000 if we were to maintain a population of 4.0 million.
- Changing the management plan at this stage would risk negative feedback from those in industry who were consulted on the existing plan, and erode the integrity of the consultation process.

Recommendations / Next Steps

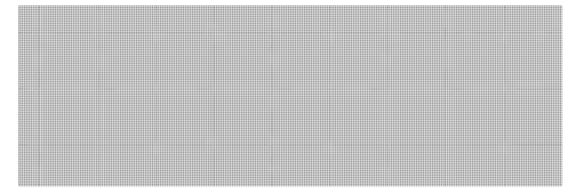
Requests for a grey seal harvest

- Industry members pursuing access to grey seals have been asked to develop a harvesting strategy (regardless of the quota of grey seals), which would include the areas to be harvested, how harvesting would take place, who would be doing the harvesting, the training of sealers, handling and transportation of carcasses, product quality control, and monitoring of harvesting/production.
- It is recommended that no decision be made on the issue of a potential large commercial grey seal harvest until:
 - DFO has received, and had the opportunity to review the industry harvesting plan;
 and
 - DFO has had the opportunity to complete and analyze the scientific information from the grey seal population survey being conducted this year.
 - If a risk-managed hunt of 5,000-10,000 animals is approved, it would go against the
 last advice provided by Science in 1997 on a grey seal harvest. This harvest should
 not take place on Sable Island.

Request for a blueback harvest

s.21(1)(a)

• It is recommended that:



Request for a Licence Freeze

- It is recommended that:
 - a one-year freeze on commercial and personal use seal licences be implemented for all areas of Atlantic Canada and Quebec, with the exception of the Quebec LNS, Aboriginal sealers, and the hunt for grey seals, effective June 1, 2004; and
 - an announcement of this licence freeze not be made until the effective date of June 1, 2004, to prevent a run on licences prior to the freeze.

Request for a TAC Increase of 180,000 Harp Seals

- It is recommended that:
 - any exclusive rights to harvest harp seals be denied based on the December 2003 consultations with the sealing industry; and
 - the TAC for harp seals that was consulted on in 2002, and included in the 2003-2005 Atlantic Seal Harvest Management Plan, remain in place until further consultations with industry can be conducted.

Larry Murray

I concur.

Geoff Regan

Minister of Fisheries and Oceans

Date:

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D. Petrcey/K. Jones/B. Rashotte/A/DG-RM/D. Rivard/S. Labonté/W. Watstal Wright/

L. Ridgeway/M. King/D. Bevan/cg #405664 - 2004 002 00646 MEMO FOR DEC - Grey seals, bluebacks, licence freeze and harp seal quotas

NUMBER OF SEAL LICENCES ISSUED BY AREA - 1995-2003

			1995			<u>.</u>		9661				100 mm	1997		
Type of Licence	NL	MI	OLNS	CB	TOTAL	NF	MI	OLNS	CB	TOTAL	NL	MI	OLNS	CB	TOTAL
Professional	7,650	837	578	53	9,118	8,403	941	386	82	9,812	7,702	931	695	83	
Assistant															
Personal Use					1,265		,			1,409					1,292
TOTAL	,		ı c												
# of vessels >35'	:														

Area: Newfoundland & Labrador (NL), Magdalen Islands (MI), Quebec Lower North Shore (QLNS), Cape Breton (CB)

			1998			3 3 1 1 1		1999					2000		27
Type of Licence	NL	IW	OLNS	CB	TOTAL	NF	QUE	SN	PEI	TOTAL	NF	QUE	SN	PEI	TOTAL
Professional	9,447	827	518	6\$	10,851	5,939	1,146	021	1	7,256	7,239	1,270	106	9	8,621
Assistant						3,105	142	9	6	3,262	2,849	144	1	11	3,005
Personal Use	1,516	2	435		1,953	1,652	355	1	1.	2,007	1,476	785	•	ı	2,261
TOTAL						10,696	1,643	176	10	12,525	11,564	2,199	104	17	13,884
# of vessels >35'						185	30	1	2	217	85	36	i	4	125
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Area: Newfoundland & Labrador (NL), Magdalen Islands (MI), Quebec Lower North Shore (QLNS), Cape Breton (CB), Nova Scotia (NS), Prince Edward Island (PEI)

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Area: Newfoundland & Labrador (NL), Quebec (Que), Nova Scotia (NS), Prince Edward Island (PEI)

Fisheries and Oceans Canada

Pêches et Océans Canada

Deputy Minister

Sous-ministre

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MARRICA

Canadä



Gouvernement du Canada Pêches et Océans

MECTS - SSCMHG: 2004-009-00386

To: / À :	Larry Murray	Date :
Subject: / Objet :	IMPACT ON PRICES IF H	ARP SEAL QUOTA WERE INCREASED
	•	
	ţ	
From / De :	Lori Ridgeway	
Via:	Matthew King / David I	Bevan
		/9636x
For Si	gnature / Pour Signature	x Information
For Co	omments / Pour commentaires	Material for the Minister / Documents à l'intention du ministre
Remarks: / Remarques		and regional offices were canvassed regarding and prices for harp seal products, as well as regarding eased seal quotas.
		rket and Industry Services Branch) was contacted and parding the prospects for the 2004 seal products market.
Drafting Offi	cer / Rédacteur : B. Bouch	nard (993-3109)/S. Leslie/R. Elliott

X:/EPA/Economic Analysis/Memo Min impact increase harvest seals Feb 04.doc



Pêches et Océans Canada

Deputy Minister

Sous-ministre

2004-009-00386

MEMORANDUM FOR THE MINISTER

IMPACT ON PRICES IF HARP SEAL QUOTA WERE INCREASED

(For information)

SUMMARY

- You requested information regarding the potential market impact of a harp seal TAC increase of 50,000.
- Anecdotal evidence from the Agriculture Canada (Market and Industry Services Branch) suggests that the market for seal pelts in 2004 may be very strong. However, the market impact of an additional 50,000 seals is unknown.

Background

- You requested an assessment of the potential market impact of a harp seal TAC increase of 50,000. In February 2003, the harp seal TAC was set at 975,000 animals over three years, with an annual TAC of up to 350,000 in any two years. Harp seals are the most populous of the seal species on the Atlantic coast and are the major species hunted for commercial purposes.
- In 2002, the harp seal TAC was 275,000, although 312,000 were harvested on the Atlantic coast. Of this total, 95% was landed in Newfoundland and Labrador. In 2002, there were four seal buyers/processors in Newfoundland and Labrador, one in PEI, and one in the Magdalen Islands. Preliminary data suggest that the 2003 catch was at about the same level as 2002. The total landed value reached \$21 million in 2002.
- The seal hunt provides income to an estimated 12,000 sealers in Eastern Canada. According to the Canadian Sealers Association, the 2002 hunt contributed an estimated \$48 million to the regional economy in product sales and indirect economic spin-offs.
- Seal products include pelts, flippers, meat, oil, and organs. Traditionally, the pelts have been the main commodity, but production of seal oil for human consumption has grown substantially in recent years. The market is considered strong for pelts and oil, while meat, flippers and organs have a limited market.



Analysis / DFO Comment

- Due to data limitations, it is impossible to say whether the harp seal would be devalued should the harvest be increased.
- However, Agriculture Canada (Market and Industry Services Branch) reports that the seal market could be very strong in 2004, stronger than that of 2003. This is based on recent mink pelt sales; mink establishes the world price for fur. Western Europe and Russia are the principle buyers in this market. U. S. legislation prevents the export of any seal products to the U. S. market.

Larry Murray

B. Bouchard/S. Leslie/R. Elliott/

Kidgeway/M. King/D.

X:/EPA/Economic Analysis/Memo Min impact increase harvest seals Feb 04.doc

D'Angelo, Marianna

From: L

Love, Kaye

Sent:

February 25, 2004 12:31 PM

To:

D'Angelo, Marianna

Cc:

Denis, Joanne; Tobin, Lena; Huard, Michaela; Flood, Ginny

Subject: MO Request: Economic analysis re seals

Marianna:

The Minister's office has requested that an economic analysis be prepared analyzing the impact on prices if the harp seal quota was increased by 50,000. (likely a Policy lead with input from Fish Mgmt)

Due in MO: March 4th

Thanks!

Kaye Love

Departmental Assistant/Adjointe ministerielle Minister's Office/Bureau du Ministre

Stn. 15N137, 200 Kent, Ottawa, Ont. K1A 0E6

2 (613) 943-2458 -- (613) 943-3098

Absistant Professional Frofessional Frofessional <th>Ц</th> <th>Newf</th> <th>Newfoundland & Labrador</th> <th>ador.</th> <th></th> <th>Quebec</th> <th></th> <th></th> <th>Gulf</th> <th></th> <th>Maritimes</th> <th></th>	Ц	Newf	Newfoundland & Labrador	ador.		Quebec			Gulf		Maritimes	
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	& Labrador	Quebec	Gulf	Maritimes	licences
2013	144	98	0	0	230
2014	180	28	0	0	208
2015	105	14	Ó	0	119
2016	128	15	0	0	143
2017	185	14	0	0	661

Whorley, David

From:

Whorley, David

Sent:

Thursday, April 18, 2019 11:23 AM

To: Cc: Lapointe, Sylvie Burns, Adam

Subject:

RE: Document from Mino

OK. I'll stand by and await news from the call.

Whorley

From: Lapointe, Sylvie <Sylvie.Lapointe@dfo-mpo.gc.ca>

Sent: Thursday, April 18, 2019 11:04 AM

To: Whorley, David <David.Whorley@dfo-mpo.gc.ca> **Cc:** Burns, Adam <Adam.Burns@dfo-mpo.gc.ca>

s.19(1)

s.21(1)(b)

Subject: FW: Document from Mino

Hi – we have a call

today to go through the attached (Kevin, Arran and I).

Sylvie

From: Hill, Johanna < Johanna. Hill@dfo-mpo.gc.ca>

Sent: Friday, April 12, 2019 10:19 AM

To: Lapointe, Sylvie < Sylvie.Lapointe@dfo-mpo.gc.ca > Cc: Patrick, Lindsey < Lindsey.Patrick@dfo-mpo.gc.ca >

Subject: Document from Mino

Hi Sylvie,

Please see the attached from Mino, Lindsey will provide you with some detail.

Thank you, Johanna

Whorley, David

From:

Whorley, David

Sent:

Thursday, April 18, 2019 11:23 AM

To:

Lester, Brian; D'Aoust, Courtney

s.19(1)

Subject:

FW: Document from Mino

s.21(1)(b)

Attachments:

Scanned from a Xerox Multifunction Printer.pdf

Get ready

From: Lapointe, Sylvie <Sylvie.Lapointe@dfo-mpo.gc.ca>

Sent: Thursday, April 18, 2019 11:04 AM

To: Whorley, David <David.Whorley@dfo-mpo.gc.ca> **Cc:** Burns, Adam <Adam.Burns@dfo-mpo.gc.ca>

Subject: FW: Document from Mino

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today to go through the attached (Kevin, Arran and I).

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From: Hill, Johanna < Johanna. Hill@dfo-mpo.gc.ca>

Sent: Friday, April 12, 2019 10:19 AM

To: Lapointe, Sylvie < Sylvie.Lapointe@dfo-mpo.gc.ca > Cc: Patrick, Lindsey < Lindsey.Patrick@dfo-mpo.gc.ca >

Subject: Document from Mino

Hi Sylvie,

Please see the attached from Mino, Lindsey will provide you with some detail.

Thank you, Johanna

Page 103 is withheld pursuant to sections est retenue en vertu des articles

21(1)(b), 20(1)(d), 20(1)(c)

of the Access to Information Act de la Loi sur l'accès à l'information

Whorley, David		
From: Sent: To: Cc: Subject:	Whorley, David Monday, May 6, 2019 10:03 AM D'Aoust, Courtney Lester, Brian RE: Document from Mino	
Stand by on this.		s.19(1)
Just talked to Science and	Adam. There is a proposal from Science coming up fast on this.	s.21(1)(b)
Dave		
Sent: Wednesday, May 1,	d.Whorley@dfo-mpo.gc.ca> ster@dfo-mpo.gc.ca>	
Have we received tasking something related required action.	action/information following the meeting on the BF from yesterday as an "informal" tasking, bu	I saw ut I am unclear of any
Thanks for clarifying, Courtney		
Sent: Thursday, April 18, 2	ester@dfo-mpo.gc.ca>; D'Aoust, Courtney <courtney.d'aoust@dfo-m< td=""><td>po.gc.ca></td></courtney.d'aoust@dfo-m<>	po.gc.ca>
Get ready		
Sent: Thursday, April 18, 2	d.Whorley@dfo-mpo.gc.ca> surns@dfo-mpo.gc.ca>	
Hi – we have a call	today to go through the attached (Kevin, Arran and I).	

Sylvie

From: Hill, Johanna < Johanna. Hill@dfo-mpo.gc.ca>

Sent: Friday, April 12, 2019 10:19 AM

To: Lapointe, Sylvie <<u>Sylvie.Lapointe@dfo-mpo.gc.ca</u>> **Cc:** Patrick, Lindsey <<u>Lindsey.Patrick@dfo-mpo.gc.ca</u>>

Subject: Document from Mino

Hi Sylvie,

Please see the attached from Mino, Lindsey will provide you with some detail.

Thank you, Johanna

Nadeau, Simon (NCR)

De:

Charron, Gizanne

Envoyé:

9 mai 2019 14:23

À:

Nadeau, Simon (NCR)

Cc:

Ramirez Sanchez, Saudiel; D'Amours, Kristen

Objet:

FW: Seal Memo

Pièces jointes:

U 2019-009-00092 - Deputy Signed.pdf; MECTS-4018006.DOCX.DRF

Catégories:

Important

From: Ramirez Sanchez, Saudiel < Saudiel.RamirezSanchez@DFO-MPO.GC.CA>

Sent: Thursday, May 9, 2019 1:12 PM

To: D'Amours, Kristen < Kristen. D'amours@dfo-mpo.gc.ca>

Cc: Charron, Gizanne < Gizanne.Charron@dfo-mpo.gc.ca >; Nadeau, Simon (NCR) < Simon.Nadeau@dfo-mpo.gc.ca >;

Landry, Jean < Jean.Landry@dfo-mpo.gc.ca>

Subject: RE: Seal Memo

Gizanne, can you please provide the electronic copy or ask ADMO for it? Bernard would also like to have a copy.

Saudiel Ramirez Sanchez, PhD

Tel. 613 990-7076

From: D'Amours, Kristen < Kristen. D'amours@dfo-mpo.gc.ca>

Sent: Thursday, May 9, 2019 12:23 PM

To: Ramirez Sanchez, Saudiel <Saudiel.RamirezSanchez@DFO-MPO.GC.CA>

Cc: Charron, Gizanne <Gizanne.Charron@dfo-mpo.gc.ca>; Nadeau, Simon (NCR) <Simon.Nadeau@dfo-mpo.gc.ca>;

Landry, Jean < Jean.Landry@dfo-mpo.gc.ca>

Subject: RE: Seal Memo

Please provide the electronic copy.

From: Ramirez Sanchez, Saudiel < Saudiel.RamirezSanchez@DFO-MPO.GC.CA>

Sent: Thursday, May 9, 2019 12:21 PM

To: D'Amours, Kristen < Kristen. D'amours@dfo-mpo.gc.ca>

Cc: Charron, Gizanne < <u>Gizanne.Charron@dfo-mpo.gc.ca</u>>; Ramirez Sanchez, Saudiel < <u>Saudiel.RamirezSanchez@DFO-MPO.GC.CA</u>>; Nadeau, Simon (NCR) < <u>Simon.Nadeau@dfo-mpo.gc.ca</u>>; Landry, Jean < <u>Jean.Landry@dfo-mpo.gc.ca</u>>

Subject: FW: Seal Memo

Importance: High

Hi Kristen, please note that Arran has asked Simon to draft a note on a seal memo. Please let know Gizanne if we need to provide Simon with an electronic copy of the memo for him to update.

Saudiel Ramirez Sanchez, PhD

Tel: 613 990-7076

From: McGill, Stephanie <Stephanie.McGill@dfo-mpo.gc.ca>

Sent: Thursday, May 9, 2019 12:13 PM

To: McPherson, Arran <<u>Arran.McPherson@dfo-mpo.gc.ca</u>>; Nadeau, Simon (NCR) <<u>Simon.Nadeau@dfo-mpo.gc.ca</u>> **Cc:** Northcott, Jennifer <<u>Jennifer.Northcott@dfo-mpo.gc.ca</u>>; Young, Susan <<u>Susan.Young@dfo-mpo.gc.ca</u>>; Ramirez Sanchez, Saudiel <<u>Saudiel.RamirezSanchez@DFO-MPO.GC.CA</u>>; Vigneault, Bernard (EC) <<u>bernard.vigneault@canada.ca</u>>

Subject: RE: Seal Memo

The memo Arran refers to is: 2019-009-00092 // Memo to Minister // Status of pinniped science in Canada and proposed way forward.

From: McPherson, Arran < Arran.McPherson@dfo-mpo.gc.ca>

Sent: May-09-19 12:04 PM

To: Nadeau, Simon (NCR) <Simon.Nadeau@dfo-mpo.gc.ca>

Cc: McGill, Stephanie < Stephanie.McGill@dfo-mpo.gc.ca >; Northcott, Jennifer < Jennifer.Northcott@dfo-mpo.gc.ca >; Young, Susan < Susan.Young@dfo-mpo.gc.ca >; Ramirez Sanchez, Saudiel < Saudiel.RamirezSanchez@DFO-MPO.GC.CA >;

Vigneault, Bernard (EC) < bernard.vigneault@canada.ca>

Subject: Seal Memo

Hi Simon, some time ago, there was a seal memo drafted and sent to the Minister (that was later withdrawn), I think we now need to turn that draft into a note that includes the update from the Meeting and focused on the Atlantic only. We would also attach the science piece and speak to the next steps —

The idea would be we would send this up

Arran

tomorrow. Is this possible? I will send you a debrief from the meeting

s.21(1)(a)

s.21(1)(b)



Fisheries and Oceans

Pêches et Océans

Canada

Canada

Deputy Minister

Sous-ministre

UNCLASSIFIED

2019-009-00092 EKME #: 4018006

MEMORANDUM FOR THE MINISTER

ATLANTIC SEAL INITIATIVE - PROPOSED WAY FORWARD (FOR DECISION)

s.19(1) s.21(1)(a) s.21(1)(b)

SUMMARY OF ADVICE TO MINISTER

The purpose of this note is to recommend a way forward for pinniped science, particularly the issue of seal predation impacts on key fish stocks on the East Coast.

On the East Coast, harp seal and grey seal populations are healthy and the subjects of commercial hunts and therefore have been the focus of Fisheries and Oceans Canada's (DFO) pinniped research over the last decades. Harvest of these seal species is significantly lower than established sustainable harvest levels, due to lack of market demand and access for seal products. While there is a consensus about the impact of grey seals on many groundfish species, and particularly in the Southern Gulf of St. Lawrence, the science basis available indicates that harp seals are not a major factor limiting cod recovery. Further, a key challenge associated with seal management is removals at the level necessary to impact on fish populations.

•	ientific findings with regards to impacts of seal sting, and may not be aware of all the efforts DFO DFO has had discussion about over the last few weeks DFO committed to providing a
(TAB 2).	A draft of this material is included for your review



BACKGROUND

On the East Coast, harp seals and grey seals are currently the subject of commercial hunts and therefore have been the focus of DFO's pinniped research (e.g., pinniped diet, impacts on prey populations) over the last decades. There is a consensus about the impact of grey seals on many groundfish species and particularly in the Southern Gulf of St. Lawrence e.g. comprehensive peer review conducted in 2010. However, the science basis available indicate that harp seals are not the most important factor limiting cod recovery.

In Atlantic Canada, commercial harvest of harp seals and grey seals are very limited and small relative to the threshold provided by science to inform sustainable harvest levels; of a possible sustainable harvest of 325,000 harp seal/year, the 2016 harvest amounted to 66,800 individuals. For grey seals, the sustainable harvest could be 34,500/year and only approximately 1600 are harvested annually.

The small commercial harvest relative to the allowable threshold is likely due to a number of factors, including challenges to domestic and international demand for seal products and international market access barriers or prohibitions. While some seal products appear to have growth potential (i.e. seal oil), significant challenges remain for other products such as seal pelts or meat. DFO's Certification and Market Access Program for Seals (CMAPS) is funding activities by commercial and indigenous applicants to address some of these market-related challenges (last planned funding year 2019-20). The Atlantic Seal Advisory Committee (ASAC) Indigenous representatives are calling for increased efforts to expand and/or re-open international markets. As well, ASAC representatives and the broader fishing industry still have concerns about seal-related mortality in key commercial fish stocks driven by increasing numbers of seals, in particular grey seals, in the Atlantic.

For grey seal, approximately a decade has passed since DFO Science advice indicated that a 65 to 70 per cent reduction of the population foraging in the Southern Gulf could potentially generate a positive impact on the cod population in the Southern Gulf of St. Lawrence. This advice prompted internal government of Canada discussions on possible management measures that could be taken. Numerous unsuccessful attempts were made to obtain approval for targeted removals of grey seals in the Southern Gulf of St. Lawrence. Further to these discussions, efforts focused on market opportunities as a commercial hunt incentive rather than directly reducing seal numbers through interventions.

DFO maintains on-going research activities on the impacts of seal on the ecosystems such as tagging and studies on seal diet. Notably, an update of the harp seal population assessment is planned for October 2019. This work will support a comprehensive review of the potential impacts of harp seals on key cod stocks planned for 2020-21. While it is difficult to establish a direct link between seal predation and key fish stocks, this work will allow the department to update the science basis available to support future management decisions on seals. More science will contribute to further understanding the impacts of seals on fish populations but will not contribute address the on-going and persistent challenge of how to incent additional removals.

	RATEGIC CONSIDERATIONS
De	partmental officials met with
	The focus of these discussions was on the existing science programs on seals lantic Canada. It was acknowledged that the continued DFO science efforts to better derstand this issue are also not broadly well understood.
П	
Ш	
Ш	
	O officials agreed to provide this information is material has been prepared and is attached for your approval (TAB 2).
111	is material has been prepared and is attached for your approval (1AB 2).
П	
П	

NEXT STEPS

s.19(1) s.21(1)(a) s.21(1)(b)

It is recommended that		approve the
distribution of the enclosed Science summary	7 (1AB 2)	
Timothy Sargent	Kevin Stringer	
Deputy Minister	Associate Deputy Minister	•
I concur with the recommendations		
I do not concur with the recommendate	ions	
 ,		
Jonathan Wilkinson Minister		
Minister's Comments:		

Fisheries and Oceans Canada Correspondence Routing Slip

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Pêches et Océans Canada

UNCLASSIFIED GCCMS #: 2019-009-00092 EKME #: 4018006

To: Pour:	Timothy Sargent Date:
Object: Objet:	ATLANTIC SEAL INITIATIVE - PROPOSED WAY FORWARD
From / De:	Bernard Vigneault, DG Ecosystem Science
Via:	Arran McPherson, ADM Ecosystems and Oceans Science
Autre(s)	Material for the Minister Documents pour le Ministre X Your Signature Votre signature Votre signature
Remark	The same of the sa
Drafting Officer/ Rédacte	

TAB 2

Atlantic Seals and Science at Fisheries & Oceans Canada

Harp seal

The estimate of total number of harp seals in the Northwest Atlantic by DFO is based on surveys of breeding colonies in Winter every 5 years. The total population is estimated using a model that incorporates the number of pups estimated from the aerial surveys, differing reproductive rates and mortality rates for animals of different ages, and factoring in variation in these rates due to different ice conditions as well as harvest amounts. The most recent survey was completed in 2017 and results will be peer reviewed in fall 2019 to update the assessment of the population.

The last (2014) assessment estimated the population to have stabilized at 7.4M animals. Several methods are used to evaluate what seals are eating, which allows to us reduce the uncertainty associated with individual methods. Such methods include analysis of bones/hard parts in stomachs, visual and DNA-based examination of content of digestive tracts and feces, and stable isotopes (allows to see where in the food chain main prey come from). DFO continues to collect additional data on abundance and diets of harp seals in the areas of concern.

Determining the impact of harp seal predation on their prey requires a good understanding of the population dynamics of the prey itself, and in particular, what other factors may be regulating these populations of prey such as the abundance of capelin (a key prey for cod), the presence of other key cod predators, and the environmental conditions impacting cod populations. This information was reviewed in 2014 and was last considered in 2018. Most recently, at the Regional Peer-review of northern cod in March 2019, capelin was found to be an important driver of cod condition, mortality and abundance.

Given the importance of the harp seal predation/lack of cod recovery issue, DFO is planning a peer review in 2020-21 that would aim at updating the information available on harp seal predation, capelin biomass, and cod abundance, and on the other factors that may impact the dynamic of cod stocks. The outcomes of the meeting will include an update of the science basis available on the potential impact of harp seal predation to ensure that the most recent science basis is available to guide future fisheries management decisions.

DFO scientists continue to study and monitor seals to better understand them and their role/impact in the ecosystems. In 2017 and 2018, harp seals off Newfoundland have been equipped with satellite transmitters which provide insights into timing, movements, and foraging behaviour by seals. Examples of the work currently underway include studying the impact of the changing environment on the body condition and reproduction of harp seals, and studying changes in seal diet, including through using DNA-based tools.

A new project starting in 2019-20 aims at determining the importance of harp seal predation on the dynamics of key forage and commercial species (capelin, herring, shrimp) in the Northern Gulf of St. Lawrence (4RS3Pn) and off Newfoundland (2J3KL) through the development of comparable ecosystem models. This project will allow to update seal consumption estimates, construct ecosystem models and better integrate seal consumption into future fish stock assessments.

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Grey seal

The grey seal population in Atlantic Canada is surveyed in Winter on breeding beaches every five years. The approach to determine the population size is similar to the approach described for harp seal above. The most recent grey seal survey was completed in 2016 and the population was estimated at 424,300 animals, from an estimated 15,000 in 1960.

Grey seals diet is very diversified and includes fish, mostly close to the seafloor, taken at depths down to 70 m or more. Their average daily food requirement is estimated to be 5 kg, but animals don't feed during the breeding season.

In October 2010, DFO evaluated the impacts of grey seals on Fish Populations in Eastern Canada. As part of this science advisory process, a number of the potential causes of increased adult Atlantic cod mortality were examined. The conclusions reached were that predation by grey seals was the greatest contributor (50%) to increased mortality in large southern Gulf of St. Lawrence cod. The conclusions of the meeting also indicated that in the Southern Gulf of St. Lawrence, groundfish and skate mortality due to grey seal continue to increase. More recently, there has also been mounting evidence that high grey seal predation may force a redistribution of many groundfish species, into potentially less productive areas.

In contrast, in 2010 DFO concluded that grey seals were not limiting cod recovery off the eastern Scotian shelf. However, grey seal predation on cod was considered important on the Scotian Shelf, and explained slightly less than 25% of the cod mortality. DFO has also worked on evaluating anti-reproduction vaccination to control populations.

s.21(1)(b)

Various research projects on grey seal are underway. For example, in 2017-18, grey seals in the Gulf of St. Lawrence have been equipped with satellite transmitters to better understand their distribution and feeding habits. The use of drones to census populations is also being tested as an alternative approach to surveying the population. Breeding and survival rates are also assessed annually.

Appendix - Atlantic seal papers published by DFO from 2012-2017

- Addison, R.F., Muir, D. C., Ikonomouc, M.G., Harwood, L. Smith, T. G., and Alikamik, J. 2014. Temporal trends in "legacy" organochlorine contaminants in blubber of ringed seals (Phoca hispida) from Ulukhaktok, NT, Canada between 1972 and 2010. Science of the Total Environment 466-467: 564-576. http://dx.doi.org/10.1016/j.scitotenv.2013.07.079.
- Andersen JM, Stenson GB, Skern-Maurizen M, Wiersma YF, Rosing-Asvid A, MO Hammill and L Boehme. 2014. Drift Diving by Hooded Seals (Cystophora cristata) in the Northwest Atlantic Ocean. PLoS ONE 9(7): e103072. doi:10.1371/journal.pone.0103072
- Andersen, J. M., Wiersma, Y. F., Stenson, G. B., Hammill, M. O., Rosing-Asvid, A., and Skern-Maurizen, M. 2013. Habitat selection by hooded seals (Cystophora cristata) in the Northwest Atlantic Ocean. ICES Journal of Marine Science, 70:173–185.
- Andersen, J.M, M. Skern-Mauritzen, L. Boehme, Y.F. Wiersma, A. Rosing-Asvid, M.O. Hammill and G.B. Stenson. 2013. Investigating Annual Diving Behaviour by Hooded Seals (Cystophora cristata) within the Northwest Atlantic Ocean. Plos One 8: Article number e80438. DOI 10.1371/journal.pone.0080438
- Bellehumeur, C., Nielsen, O., Measures, L., Harwood, L., Goldstein, T., Boyle, B., and Gagnon, C. 2015. Herpesviruses including novel gammaherpes viruses are widespread among phocid seal species in Canada. Journal of Wildlife Disease 52 (1): 70-81
- Bennett, K.A., M. Hammill, and S. Currie. 2013. Liver glucose-6-phosphatase proteins in suckling and weaned grey seal pups: structural similarities to other mammals and relationship to nutrition, insulin signalling and metabolite levels. Journal Of Comparative Physiology B-Biochemical Systemic And Environmental Physiology 183:1075-1088. Doi:10.1007/S00360-013-0768-X
- Bennett, KA, IS MacMillan, M Hammill, and S Currie. 2014. HSP70 abundance and antioxidant capacity in feeding and fasting gray seal pups: Suckling is associated with higher levels of key cellular defenses. Physiological and Biochemical Zoology 87(5):663–676.
- Boehme L, Thompson D, Fedak M, Bowen D, Hammill MO, et al. (2012) How Many Seals Were There? The Global Shelf Loss during the Last Glacial Maximum and Its Effect on the Size and Distribution of Grey Seal Populations. PLoS ONE 7(12): e53000. doi:10.1371/journal.pone.0053000
- Bousquet, E. Chassot, D.E. Duplisea, and Mike O. Hammill. 2014. Forecasting the Major Influences of Predation and Environment on Cod Recovery in the Northern Gulf of St. Lawrence. PLoS ONE 9(2): e82836. doi:10.1371/journal.pone.0082836
- Bowen, W. D. 2014. Whale and seal research at BIO through five decades. In VOYAGE OF DISCOVERY, Fifty Years of Marine Research at Canada's Bedford Institute of Oceanography: A commemorative volume in celebration of the 50th anniversary of the Bedford institute of Oceanography Dartmouth, Nova Sotia, Canada, 1962 2012. Ed. David N. Nettleship, D. E., Gordon, D. C., Lewis, M. C. F., and Latremouille, M. P. Pp. 93-102.

- Bowen, W. D., C. E. den Heyer, McMillan, JI, Iverson SJ. 2015. Offspring size at weaning affects survival to recruitment and reproductive performance of primiparous gray seals. Ecology and Evolution 5(7): 1412-1424
- Brown, TM, DCG Muir, SH Ferguson, BG Young, AT Fisk, KJ Reimer, X Wang. 2016. Mercury and cadmium in ringed seals in the Canadian Arctic: influence of location and diet. Science of the Total Environment 545–546: 503–511
- Buren, A. D., M. Koen-Alonso and G. B. Stenson. 2014. The role of harp seals, fisheries and food availability in drive the dynamics of northern cod. Mar. Ecol. Prog. Ser. In Press. Accepted June 2014.
- Buren, A.D., M. Koen-Alonso, P. Pepin, F. Mowbry, B. Nakashima, G. Stenson, N. Ollerhead, W.A. Montevecchi. 2014. Bottom-up regulation of capelin, a keystone forage species, PLoS One 9(2):e87589. Doi:10.1371/journal.pone.0087589.
- Carr, S.M., A.T. Duggan, G.B. Stenson and H.D. Marshall. 2015. Quantitative phylogenomics of within-species mitogenome variation: Monte Carlo and non-parametric analysis of phylogeographic structure among discrete transatlantic breeding areas of harp seals (Pagophilus groenlandicus). PLoS ONE 10(8): e0134207. doi:10.137/journal.pone.0134207
- Daoust, P.-Y., C. Caraguel, H. Fenton, M. O. Hammill, L. D. Roy, and J. Spears. 2012. Assessment of current and alternative methods for killing young grey seals (Halichoerus grypus) during commercial harvest. DFO Can. Sci. Advis. Sec. Res. Doc. 2012/xxx. iv + xx p. Available at http://www.dfo-mpo.gc.ca/csas.
- Daoust, P.-Y., M. Hammill, G. Stenson and C. Caraguel. 2014. A review of animal welfare implications of the Canadian commercial seal hunt: a critique. Marine Policy. 43:367-371.
- den Heyer, C. E., and W. D. Bowen. 2017. Estimating changes in vital rates of Sable Island grey seals using mark-recapture analysis. DFO Can. Sci. Advis. Sec. Res. Doc. 2017/054. v + 27 p.
- den Heyer, C., W.D. Bowen, and J.I. McMillan. 2013. Long-term changes in grey seal vital rates at Sable Island estimated from POPAN mark-resighting analysis of branded seals. Can. Sci. Advis. Sec. Res. Doc., 2013/21.
- den Heyer, C.E., S.L.C. Lang, W.D. Bowen, and M.O. Hammill. 2017. Pup production at Scotian Shelf grey seal (Halichoerus grypus) colonies in 2016. DFO Can. Sci. Advis. Sec. Res. Doc. 2017/056. v + 35 p.
- Edwards, A.M., Haigh, R., Tallman, R., Swain, D.P., Carruthers, T.R., Cleary, J.S., Stenson, G. and Doniol-Valcroze, T. 2017. Proceedings of the Technical Expertise in Stock Assessment (TESA) National Workshop on 'Incorporating an ecosystem approach into single-species stock assessments' 21-25 November 2016, Nanaimo, British Columbia. Can. Tech. Rep. Fish. Aquat. Sci. 3213: vi + 53 p.
- Frie, A. K., G. Stenson and T. Haug. 2012. Long term trends in reproductive and demographic parameters of female Northwest Atlantic hooded seals (Cystophora cristata (Erxleben, 1777): Population responses to ecosystem change? Can. J. Zool. 90:376-392.
- Frie, A. K., Hammill, M. O., Hauksson, E., Lind, Y., Lockyer, C., Stenman, O., and Svetocheva, O. 2013. Error patterns in age estimation and tooth readability assignment of grey seals (Halichoerus grypus): results from a transatlantic, image-based, blind-reading study using known-age animals. ICES Journal of Marine Science, 70:418-430. doi:10.1093/icesjms/fss169
- Frouin, H., Lebeuf, M., Hammill, M.O., Fournier, M. 2012. Transfer of PBDEs and chlorinated POPs from mother to pup during lactation in harp seals Phoca groenlandica. Science of the Total Environment 417–418 (2012) 98–107

- Hammill M.O., J. Dale, G.B. Stenson, C.E. den Heyer, J-F Gosselin, and D. Johnston. 2016. Comparison of methods to estimate grey seal pup production at different colonies DFO Can. Sci. Advis. Sec. Res Doc. 2017/041. iv + 19 p.
- Hammill, M. O and Stenson, G. B. 2014. Changes in ice conditions and potential impact on harp seal pupping. DFO Can. Sci. Advis. Sec. Res. Doc. 2014/025. iv + 14 p.
- Hammill, M. O. and Stenson, G. B. 2014. Assessing Harp Seals and Providing Advice in a Multiyear Framework. DFO Can. Sci. Advis. Sec. Res. Doc. 2014/038. iv + 22 p.
- Hammill, M. O., den Heyer, C.E. and Bowen, W.D. 2014. Grey Seal Population Trends in Canadian Waters, 1960-2014. DFO Can. Sci. Advis. Sec. Res. Doc. 2014/037. iv + 44 p.
- Hammill, M. O., G. B. Stenson, A. Mosnier and T. Doniol-Valcroze. 2014. Abundance estimates of Northwest Atlantic harp seals and management advice for 2014. DFO Can. Sci. Advis. Sec. Res. Doc. 2014/022.
- Hammill, M.O. and G.B. Stenson. 2013. A Discussion of the Precautionary Approach and its Application to Atlantic Seals. DFO Can. Sci. Advis. Sec.Res. Doc. 2013/030. v + 25 p.
- Hammill, M.O., and C. Sauvé. 2017. Growth and condition in harp seals-evidence of density dependent and density independent influences. ICES J. of Marine Science 74:1395-1407
- Hammill, M.O., C. den Heyer, and W.D. Bowen. 2014. Northwest Atlantic grey seal population trends, 1960-2013. DFO Can. Sci. Advis. Sec. Res. Doc.
- Hammill, M.O., G.B. Stenson, D.P. Swain and H.P. Benoît. 2014. Feeding by grey seals on endangered stocks of Atlantic cod and white hake. ICES J. Mar. Sci. doi:10.1093/icesjms/fsu123
- Hammill, M.O., G.B. Stenson, T. Doniol-Valcroze and A. Mosnier. 2012. Estimating carrying capacity and population trends of Northwest Atlantic harp seals, 1952-2012. Canadian Science Advisory Secretariat Res. Doc. 2012/148. iii + 31 p.
- Hammill, M.O., G.B. Stenson, T. Doniol-Valcroze and A. Mosnier. 2015. Conservation of Northwest Atlantic harp seals: past success, future uncertainty? Biological Conservation. 192:181-191
- Hammill, M.O., J-F. Gosselin and G.B. Stenson. 2017. Pup production of Northwest Atlantic grey seals in the Gulf of St. Lawrence. DFO Can. Sci. Advis. Sec. Res. Doc. 2017/043. iv + 14 p.
- Hammill, M.O., Stenson, G.B. and Mosnier, A. 2016. Science Advice on Theoretical Harvest Reduction Scenarios and Sustainable Catches of NWA harp seals? DFO Can. Sci. Advis. Sec. Res. Doc. 2016/055. v + 32 p.
- Hammill, M.O.,den Heyer, C.E., and Bowen, W.D. 2016. Grey Seal Population Trends in Canadian Waters, 1960-2016 and Harvest Advice. DFO Can. Sci. Advis. Sec. Res. Doc. 2017/052. vi + 30 p.
- Harvey, V., M.O. Hammill, D.P. Swain, G.A. Breed, C. Lydersen and K.M. Kovacs. 2012. Winter foraging by a top predator, the grey seal, in relation to the distribution of prey. Marine Ecology Progress Series 462: 273-286.
- Heaslip, S.G., W.D. Bowen, and S.J. Iverson. 2014. Testing predictions of optimal diving theory using animal-borne video from harbour seals (Phoca vitulina). Canadian Journal of Zoology 92:309-318.
- Lidgard, D. C., W. D. Bowen, D. J. Boness. 2012. Longitudinal changes in male physical traits and the implications for mating behaviour and success in a long-lived polygynous mammal, the grey seal. Can. J. Zool. 90:849-860.
- Øigård,T.-A., A.K. Frie, K., T. Nilssen and M.O. Hammill. 2012. Modelling the abundance of grey seals (Halichoerus grypus) along the Norwegian coast. ICES J. of Mar. Sci. 69:1436-1447. doi 10.1093/icesjms/fss103

- Pearson, L.E., H.E.M. Liwang, M.O. Hammill, J.M. Burns. 2014. Shifts in thermoregulatory strategy during ontogeny in harp seals (Pagophilus groenlandicus). J. of Thermal Biology 44:93-102. DOI: 10.1016/j.itherbio.2014.02.001
- Perry, E., G.B. Stenson & A.D. Buren. 2016. Attendance and nursing patterns of harp seals in the harsh environment of the northwest Atlantic. Polar Biology. DOI: 10.1007/s00300-016-1938-6
- Puryear, Wendy B., M. Keogh, N. Hill, J. Moxley, E. Josephson, K.R. Davis, C. Bandoro, D. Lidgard, A. Bogomolni, M. Levin, Lang S., Hammill, M., Bowen, W.D., Johnston, D.W., Romano, T., Waring, G., and Runstadler. 2016. Prevalence of influenza A virus in live-captured North Atlantic gray seals: a possible wild reservoir. Emerging Microbes and Infections 5. e81; doi:10.1038/emi.2016.77
- Sauvé, C, J. Van de Walle, M.O. Hammill, J.P.Y. Arnould, G. Beauplet. 2014. Stomach Temperature Records Reveal Nursing Behaviour and Transition to Solid Food Consumption in an Unweaned Mammal, the Harbour Seal Pup (Phoca vitulina). PLoS ONE 9(2): e90329. doi:10.1371/journal.pone.0090329
- Sauvé, CC, G Beauplet, MO Hammill, and I Charrier. 2015. Acoustic analysis of airborne, underwater, and amphibious mother attraction calls by wild harbor seal pups (Phoca vitulina). J. of Mammalogy DOI:10.1093/jmammal/gyv064
- Sauvé, CC, G Beauplet, MO Hammill, and I Charrier. 2015. Mother-pup vocal recognition in harbour seals: influence of maternal behaviour, pup voice and habitat sound properties. Animal Behaviour 105:109-120
- Stenson, G. B., D. Wakeham, A. Buren and M. Koen-Alonso. 2014. Density-dependent and density-independent factors influencing reproductive rates in Northwest Atlantic harp seals, Pagophilus groenlandicus. DFO Can. Sci. Advis. Sec. Res. Doc. 2014/058.
- Stenson, G.B. 2012 Report of the Joint NAFO/ICES Working group on Harp and Hooded Seals (WGHARP). NAFO SCS Doc 12/17.
- Stenson, G.B. 2012. Estimating consumption of prey by harp seals, Pagophilus groenlandicus, in NAFO divisions 2J3KL. Canadian Science Advisory Secretariat Res. Doc. 2012/156.
- Stenson, G.B. 2014. The Status of harp and hooded seals in the North Atlantic. NAFO SCR Doc 14/026. N6321.
- Stenson, G.B. 2014. Updated Estimates of Harp Seal Removals in the Northwest Atlantic. DFO Can. Sci. Advis. Sec. Res. Doc. 2014/015. v + 35 p.
- Stenson, G.B. and M.O. Hammill. 2012. Living on the edge: Observations of Northwest Atlantic harp seals in 2010 and 2011. Can. Sci. Advis. Sec. Res. Doc. 2011/108. Iv + 12 p.
- Stenson, G.B. and M.O. Hammill. 2014. Can ice breeding seals adapt to habitat loss in a time of climate change? ICES J. Mar. Sci. doi:10.1093/icesjms/fsu074. Online May 2014.
- Stenson, G.B., A.D. Buren and M. Koen-Alonso. 2016. The impact of changing climate and abundance on reproduction in an ice-dependent species, the Northwest Atlantic harp seal, Pagophilus groenlandicus. ICES. Journal of Marine Science 73:250-262
- Stenson, G.B., M.O. Hammill, J.W. Lawson and J-F. Gosselin. 2014. Estimating pup production of Northwest Atlantic harp seals, Pagophilus groenlandicus, in 2012. DFO Can. Sci. Advis. Sec. Res. Doc. 2014/057.
- Sutherland, D.A., F. Straneo, G. B. Stenson, F. J.M. Davidson, M.O. Hammill, and A. Rosing-Asvid. 2013 Atlantic water variability on the SE Greenland continental shelf and its relationship to SST and bathymetry. J. Geophysical Research: Oceans, 118, 1–9, doi:10.1029/2012JC008354.

- Swain, D.P., H.P. Benoit, and M.O. Hammill. 2015. Spatial distribution of fishes in a Northwest Atlantic ecosystem in relation to risk of predation by a marine mammal. J. Animal Ecol. 84, 1286–1298
- Tucker, S. G. Stenson, W.D. Bowen and S. Iverson. 2013. Fueling phocids: divergent exploitation of primary energy sources and parallel ontogenetic diet switches among three species of sub-arctic seals. Mar. Mammal. Sci. 29(4): E428–E447.
- Ure, D.L., W.D. Bowen, and C.E. den Heyer. 2016. Grey seal population status and trends, Sable Island National Park Reserve, in State of Park Assessment Technical Report
- Weitzman. J., C. den Heyer, and W. D. Bowen 2017. Factors influencing and consequences of breeding dispersal and habitat choice in female grey seals (Halichoerus grypus) on Sable Island, Nova Scotia. Oecologia 183: 367-378, doi:10.1007/s00442-016-3764-5

Nadeau, Simon (NCR)

De:

Landry, Jean

Envoyé:

10 mai 2019 08:01

À:

Nadeau, Simon (NCR)

Objet:

RE: Building support for seal science findings.docx

Pièces jointes:

Building support for seal science findings.docx

Catégories:

Important

Bonne note. Qq commentaires pour ta considération.

Jean Landry

Director, Marine Mammals Science
Fisheries and Oceans Canada / Government of Canada
Jean.Landry@dfo-mpo.gc.ca / Tel: 613-993-0029

Directeur, Science – Mammifères marins Pêches et Océans Canada / Gouvernement du Canada <u>Jean.Landry@dfo-mpo.gc.ca</u> / Tél.: 613-993-0029



Government of Canada Gouvernement du Canada Canadä

From: Nadeau, Simon (NCR) <Simon.Nadeau@dfo-mpo.gc.ca>

Sent: Thursday, May 9, 2019 4:39 PM

To: Landry, Jean < Jean.Landry@dfo-mpo.gc.ca>

Subject: Building support for seal science findings.docx

Ébauche pour commentaires. Je vais aussi produire la lettre qui serait jointe



Fisheries and Oceans Canada Pêches et Océans Canada

Deputy Minister

Sous-ministre

UNCLASSIFIED

2019-EKME #:

MEMORANDUM FOR THE MINISTER

BUILDING SUPPORT FOR SEAL SCIENCE FINDINGS (FOR DECISION)

SUMMARY OF ADVICE TO MINISTER

In Atlantic Canada, harp seal and grey seal populations are healthy and the subjects of commercial hunts and therefore have been the focus of DFO's pinniped research over the last decades.

While there is a consensus about the impact of grey seals on many groundfish species and particularly in the Southern Gulf of St. Lawrence, the science basis available indicate that harp seals do not represent the most important factor limiting cod recovery.

However, gGroundfish harvesters are often skeptical of the DFO scientific findings with regards to impacts of seal predation on the species they are harvesting. In addition, -they but also may not be aware of all the efforts DFO science has dedicated to this issue.

s.21(1)(a)

s.21(1)(b)

BACKGROUND

On the East coast, harp seals and grey seals are currently the subject of commercial hunts and therefore have been the focus of DFO's pinniped research (e.g., pinniped diet, impacts on prey populations) over the last decades. While there is a consensus about the impact of grey seals on many groundfish species and particularly in the Southern Gulf of St. Lawrence, the science basis available indicate that harp seals do not represent the most important factor limiting cod recovery.

In Atlantic Canada, commercial harvest of harp seals and grey seals are very limited and small relative to the <u>harvest level</u> threshold provided by science to inform sustainable harvest levels; of a possible sustainable harvest of 325,000 harp seal/year, the 2016 harvest amounted to 66,800 individuals.

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For grey seal, approximately a decade has passed since DFO Science advice indicated that a 65-70% reduction of the population would be needed to potentially generate a positive impact on the cod population in the Southern Gulf of St. Lawrence.

s.21(1)(a)

s.21(1)(b)

However, many groundfish harvesters haven't bought into DFO scientific findings with regards to impacts of seal predation on the species they are harvesting. The continued DFO science efforts to better understand this issue are also not broadly known.



Commenté [LJ1]:

STRATEGIC CONSIDERATIONS

Fisheries management decisions that may affect the livelihood of fishermen and their families are based on science. Increasing harvesters acceptance of such decisions depends, in part, on the buy in of the relevant DFO science findings and advice.

Buy in depends on knowledge and understanding of the science basis, as well as thrust in those who are generating it.

Commenté [L12]: Un seul para me semble ok

ADVICE AND RECOMMENDATIONS TO MINISTER

2019-009-0092. Status of pinniped science in Canada and proposed way forward Ashley Kling, 990-8202. Senior Science Advisor. Louise Laverdure *KD

-3	-	UNCLASSIFIED	
	Kevin Stringer Associate Deputy Minister		
I concur with the recommendations I do not concur with the recommendations		s.21([*] s.21(*	
Jonathan Wilkinson Minister			

2019-009-00992- Status of pinniped science in Canada and proposed way forward Ashley Kling, 990-8202. Senior Science Advisor Louise Laverdure KD

Minister's Comments:

Greer, Stephanie

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McPherson, Arran

Sent:

Thursday, May 9, 2019 11:17 AM

To:

Burns, Adam

Cc:

Robinson, Connor; McGill, Stephanie; Northcott, Jennifer; Béchard, Geneviève; Lapointe,

Sylvie

Subject:

RE: Seals Update for MIN

Thanks. I am turning this into a formal memo to Min and will include you on sign off but we will need to move it fast. Arran

From: Burns, Adam

Sent: Thursday, May 9, 2019 11:15 AM

To: McPherson, Arran < Arran. McPherson@dfo-mpo.gc.ca>

Cc: Robinson, Connor < Connor.Robinson@dfo-mpo.gc.ca>; McGill, Stephanie < Stephanie.McGill@dfo-mpo.gc.ca>; Northcott, Jennifer < Jennifer.Northcott@dfo-mpo.gc.ca>; Béchard, Geneviève < Genevieve.Bechard@dfo-mpo.gc.ca>;

Lapointe, Sylvie <Sylvie.Lapointe@dfo-mpo.gc.ca>

Subject: Re: Seals Update for MIN

Looks good to me.

On May 9, 2019, at 8:37 AM, McPherson, Arran < <u>Arran.McPherson@dfo-mpo.gc.ca</u>> wrote:

Hi Adam, I talking to Tim about this later this morning, but in the meantime, would welcome your review of the below. This is what I would propose to give to MINO on Seals. Connor, would welcome your/Kevin's views as well. Arran

s.19(1)

s.21(1)(b) ***********

Further to the Minister's discussion with Kevin Stringer, Sylvie Lapointe, Minister's staff, and I

Atlantic Seals and Science at Fisheries & Oceans Canada

Harp seal

s.19(1)

The estimate of total number of harp seals in the Northwest Atlantic by DFO is based on surveys of breeding colonies in Winter every 5 years. The total population is estimated using a model that incorporates the number of pups estimated from the aerial surveys, differing reproductive rates and mortality rates for animals of different ages, and factoring in variation in these rates due to different ice conditions as well as harvest amounts. The most recent survey was completed in 2017 and results will be peer reviewed in fall 2019 to update the assessment of the population. The last (2014) assessment estimated the population to have stabilized at 7.4M animals.

Several methods are used to evaluate what seals are eating, which allows to us reduce the uncertainty associated with individual methods. Such methods include analysis of bones/hard parts in stomachs, visual and DNA-based examination of content of digestive tracts and feces, and stable isotopes (allows to see where in the food chain main prey come from). DFO continues to collect additional data on abundance and diets of harp seals in the areas of concern.

Determining the impact of harp seal predation on their prey requires a good understanding of the population dynamics of the prey itself, and in particular, what other factors may be regulating these populations of prey such as the abundance of capelin (a key prey for cod), the presence of other key cod predators, and the environmental conditions impacting cod populations. This information was reviewed in 2014 and was last considered in 2018. Most recently, at the Regional Peer-review of northern cod in March 2019, capelin was found to be an important driver of cod condition, mortality and abundance. Given the importance of the harp seal predation/lack of cod recovery issue, DFO is planning a peer review in 2020-21 that would aim at updating the information available on harp seal predation, capelin biomass, and cod abundance, and on the other factors that may impact the dynamic of cod stocks. The outcomes of the meeting will include an update of the science basis available on the potential impact of harp seal predation to ensure that the most recent science basis is available to guide future fisheries management decisions.

DFO scientists continue to study and monitor seals to better understand them and their role/impact in the ecosystems. In 2017 and 2018, harp seals off Newfoundland have been equipped with satellite transmitters which provide insights into timing, movements, and foraging behaviour by seals. Examples of the work currently underway include studying the impact of the changing environment on the body condition and reproduction of harp seals, and studying changes in seal diet, including through using DNA-based tools.

A new project starting in 2019-20 aims at determining the importance of harp seal predation on the dynamics of key forage and commercial species (capelin, herring, shrimp) in the Northern Gulf of St. Lawrence (4RS3Pn) and off Newfoundland (2J3KL) through the development of comparable ecosystem models. This project will allow to update seal consumption estimates, construct ecosystem models and better integrate seal consumption into future fish stock assessments.

Grey seal

The grey seal population in Atlantic Canada is surveyed in Winter on breeding beaches every five years. The approach to determine the population size is similar to the approach described for harp seal above. The most recent grey seal survey was completed in 2016 and the population was estimated at 424,300 animals, from an estimated 15,000 in 1960.

Grey seals diet is very diversified and includes fish, mostly close to the seafloor, taken at depths down to 70 m or more. Their average daily food requirement is estimated to be 5 kg, but animals don't feed during the breeding season.

In October 2010, DFO evaluated the impacts of grey seals on Fish Populations in Eastern Canada. As part of this science advisory process, a number of the potential causes of increased adult Atlantic cod mortality were examined. The conclusions reached were that predation by grey seals was the greatest contributor (50%) to increased mortality in large southern Gulf of St. Lawrence cod. The conclusions of the meeting also indicated that in the Southern Gulf of St. Lawrence, groundfish and skate mortality due to grey seal continue to increase. More recently, there has also been mounting evidence that high grey seal predation may force a redistribution of many groundfish species, into potentially less productive areas.

In contrast, in 2010 DFO concluded that grey seals were not limiting cod recovery off the eastern Scotian shelf. However, grey seal predation on cod was considered important on the Scotian Shelf, and explained slightly less than 25% of the cod mortality. DFO has also worked on evaluating anti-reproduction vaccination to control populations.

Various research projects on grey seal are underway. For example, in 2017-18, grey seals in the Gulf of St. Lawrence have been equipped with satellite transmitters to better understand their distribution and feeding habits. The use of drones to census populations is also being tested as an alternative approach to surveying the population. Breeding and survival rates are also assessed annually.

s.21(1)(b)

Appendix - Atlantic seal papers published by DFO from 2012-2017

Addison, R.F., Muir, D. C., Ikonomouc, M.G., Harwood, L. Smith, T. G., and Alikamik, J. 2014. Temporal trends in "legacy" organochlorine contaminants in blubber of ringed seals (Phoca hispida) from Ulukhaktok, NT, Canada between 1972 and 2010. Science of the Total Environment 466-467: 564-576. http://dx.doi.org/10.1016/j.scitotenv.2013.07.079.

Andersen JM, Stenson GB, Skern-Maurizen M, Wiersma YF, Rosing-Asvid A, MO Hammill and L Boehme . 2014. Drift Diving by Hooded Seals (Cystophora cristata) in the Northwest Atlantic Ocean. PLoS ONE 9(7): e103072. doi:10.1371/journal.pone.0103072

Andersen, J. M., Wiersma, Y. F., Stenson, G. B., Hammill, M. O., Rosing-Asvid, A., and Skern-Maurizen, M. 2013. Habitat selection by hooded seals (Cystophora cristata) in the Northwest Atlantic Ocean. – ICES Journal of Marine Science, 70:173–185.

- Andersen, J.M, M. Skern-Mauritzen, L. Boehme, Y.F. Wiersma, A. Rosing-Asvid, M.O. Hammill and G.B. Stenson. 2013. Investigating Annual Diving Behaviour by Hooded Seals (Cystophora cristata) within the Northwest Atlantic Ocean. Plos One 8: Article number e80438. DOI 10.1371/journal.pone.0080438
- Bellehumeur, C., Nielsen, O., Measures, L., Harwood, L., Goldstein, T., Boyle, B., and Gagnon, C. 2015. Herpesviruses including novel gammaherpes viruses are widespread among phocid seal species in Canada. Journal of Wildlife Disease 52 (1): 70-81
- Bennett, K.A., M. Hammill, and S. Currie. 2013. Liver glucose-6-phosphatase proteins in suckling and weaned grey seal pups: structural similarities to other mammals and relationship to nutrition, insulin signalling and metabolite levels. Journal Of Comparative Physiology B-Biochemical Systemic And Environmental Physiology 183:1075-1088. Doi:10.1007/S00360-013-0768-X
- Bennett, KA, IS MacMillan, M Hammill, and S Currie. 2014. HSP70 abundance and antioxidant capacity in feeding and fasting gray seal pups: Suckling is associated with higher levels of key cellular defenses. Physiological and Biochemical Zoology 87(5):663–676.
- Boehme L, Thompson D, Fedak M, Bowen D, Hammill MO, et al. (2012) How Many Seals Were There? The Global Shelf Loss during the Last Glacial Maximum and Its Effect on the Size and Distribution of Grey Seal Populations. PLoS ONE 7(12): e53000. doi:10.1371/journal.pone.0053000
- Bowen, W. D. 2014. Whale and seal research at BIO through five decades. In VOYAGE OF DISCOVERY, Fifty Years of Marine Research at Canada's Bedford Institute of Oceanography: A commemorative volume in celebration of the 50th anniversary of the Bedford institute of Oceanography Dartmouth, Nova Scotia, Canada, 1962 2012. Ed. David N. Nettleship, D. E., Gordon, D. C., Lewis, M. C. F., and Latremouille, M. P. Pp. 93-102.
- Bowen, W. D., C. E. den Heyer, McMillan, JI, Iverson SJ. 2015. Offspring size at weaning affects survival to recruitment and reproductive performance of primiparous gray seals. Ecology and Evolution 5(7): 1412-1424
- Brown, TM, DCG Muir, SH Ferguson, BG Young, AT Fisk, KJ Reimer, X Wang. 2016. Mercury and cadmium in ringed seals in the Canadian Arctic: influence of location and diet. Science of the Total Environment 545–546: 503–511
- Buren, A. D., M. Koen-Alonso and G. B. Stenson. 2014. The role of harp seals, fisheries and food availability in drive the dynamics of northern cod. Mar. Ecol. Prog. Ser. In Press. Accepted June 2014.
- Buren, A.D., M. Koen-Alonso, P. Pepin, F. Mowbry, B. Nakashima, G. Stenson, N. Ollerhead, W.A. Montevecchi. 2014. Bottom-up regulation of capelin, a keystone forage species, PLoS One 9(2):e87589. Doi:10.1371/journal.pone.0087589.
- Carr, S.M., A.T. Duggan, G.B. Stenson and H.D. Marshall. 2015. Quantitative phylogenomics of within-species mitogenome variation: Monte Carlo and non-parametric analysis of phylogeographic structure among discrete transatlantic breeding areas of harp seals (Pagophilus groenlandicus). PLoS ONE 10(8): e0134207. doi:10.137/journal.pone.0134207
- Daoust, P.-Y., C. Caraguel, H. Fenton, M. O. Hammill, L. D. Roy, and J. Spears. 2012. Assessment of current and alternative methods for killing young grey seals (Halichoerus grypus) during commercial harvest. DFO Can. Sci. Advis. Sec. Res. Doc. 2012/xxx. iv + xx p. Available at http://www.dfo-mpo.gc.ca/csas.
- Daoust, P.-Y., M. Hammill, G. Stenson and C. Caraguel. 2014. A review of animal welfare implications of the Canadian commercial seal hunt: a critique. Marine Policy. 43:367-371.
- den Heyer, C. E., and W. D. Bowen. 2017. Estimating changes in vital rates of Sable Island grey seals using mark-recapture analysis. DFO Can. Sci. Advis. Sec. Res. Doc. 2017/054. v + 27 p.
- den Heyer, C., W.D. Bowen, and J.I. McMillan. 2013. Long-term changes in grey seal vital rates at Sable Island estimated from POPAN mark-resighting analysis of branded seals. Can. Sci. Advis. Sec. Res. Doc., 2013/21.
- den Heyer, C.E., S.L.C. Lang, W.D. Bowen, and M.O. Hammill. 2017. Pup production at Scotian Shelf grey seal (Halichoerus grypus) colonies in 2016. DFO Can. Sci. Advis. Sec. Res. Doc. 2017/056. v + 35 p.

- Edwards, A.M., Haigh, R., Tallman, R., Swain, D.P., Carruthers, T.R., Cleary, J.S., Stenson, G. and Doniol-Valcroze, T. 2017. Proceedings of the Technical Expertise in Stock Assessment (TESA) National Workshop on 'Incorporating an ecosystem approach into single-species stock assessments' 21-25 November 2016, Nanaimo, British Columbia. Can. Tech. Rep. Fish. Aquat. Sci. 3213: vi + 53 p.
- Frie, A. K., G. Stenson and T. Haug. 2012. Long term trends in reproductive and demographic parameters of female Northwest Atlantic hooded seals (Cystophora cristata (Erxleben, 1777): Population responses to ecosystem change? Can. J. Zool. 90:376-392.
- Frie, A. K., Hammill, M. O., Hauksson, E., Lind, Y., Lockyer, C., Stenman, O., and Svetocheva, O. 2013. Error patterns in age estimation and tooth readability assignment of grey seals (Halichoerus grypus): results from a transatlantic, image-based, blind-reading study using known-age animals. ICES Journal of Marine Science, 70:418-430. doi:10.1093/icesjms/fss169
- Frouin, H., Lebeuf, M., Hammill, M.O., Fournier, M. 2012. Transfer of PBDEs and chlorinated POPs from mother to pup during lactation in harp seals Phoca groenlandica. Science of the Total Environment 417–418 (2012) 98–107
- Hammill M.O., J. Dale, G.B. Stenson, C.E. den Heyer, J-F Gosselin, and D. Johnston. 2016. Comparison of methods to estimate grey seal pup production at different colonies DFO Can. Sci. Advis. Sec. Res Doc. 2017/041. iv + 19 p.
- Hammill, M. O and Stenson, G. B. 2014. Changes in ice conditions and potential impact on harp seal pupping. DFO Can. Sci. Advis. Sec. Res. Doc. 2014/025. iv + 14 p.
- Hammill, M. O. and Stenson, G. B. 2014. Assessing Harp Seals and Providing Advice in a Multiyear Framework. DFO Can. Sci. Advis. Sec. Res. Doc. 2014/038. iv + 22 p.
- Hammill, M. O., den Heyer, C.E. and Bowen, W.D. 2014. Grey Seal Population Trends in Canadian Waters, 1960-2014. DFO Can. Sci. Advis. Sec. Res. Doc. 2014/037. iv + 44 p.
- Hammill, M. O., G. B. Stenson, A. Mosnier and T. Doniol-Valcroze. 2014. Abundance estimates of Northwest Atlantic harp seals and management advice for 2014. DFO Can. Sci. Advis. Sec. Res. Doc. 2014/022.
- Hammill, M.O. and G.B. Stenson. 2013. A Discussion of the Precautionary Approach and its Application to Atlantic Seals. DFO Can. Sci. Advis. Sec.Res. Doc. 2013/030. v + 25 p.
- Hammill, M.O., and C. Sauvé. 2017. Growth and condition in harp seals-evidence of density dependent and density independent influences. ICES J. of Marine Science 74:1395-1407
- Hammill, M.O., C. den Heyer, and W.D. Bowen. 2014. Northwest Atlantic grey seal population trends, 1960-2013. DFO Can. Sci. Advis. Sec. Res. Doc.
- Hammill, M.O., G.B. Stenson, D.P. Swain and H.P. Benoît. 2014. Feeding by grey seals on endangered stocks of Atlantic cod and white hake. ICES J. Mar. Sci. doi:10.1093/icesjms/fsu123
- Hammill, M.O., G.B. Stenson, T. Doniol-Valcroze and A. Mosnier. 2012. Estimating carrying capacity and population trends of Northwest Atlantic harp seals, 1952-2012. Canadian Science Advisory Secretariat Res. Doc. 2012/148. iii + 31 p.
- Hammill, M.O., G.B. Stenson, T. Doniol-Valcroze and A. Mosnier. 2015. Conservation of Northwest Atlantic harp seals: past success, future uncertainty? Biological Conservation. 192:181-191
- Hammill, M.O., J-F. Gosselin and G.B. Stenson. 2017. Pup production of Northwest Atlantic grey seals in the Gulf of St. Lawrence. DFO Can. Sci. Advis. Sec. Res. Doc. 2017/043. iv + 14 p.
- Hammill, M.O., Stenson, G.B. and Mosnier, A. 2016. Science Advice on Theoretical Harvest Reduction Scenarios and Sustainable Catches of NWA harp seals? DFO Can. Sci. Advis. Sec. Res. Doc. 2016/055. v + 32 p.
- Hammill, M.O.,den Heyer, C.E., and Bowen, W.D. 2016. Grey Seal Population Trends in Canadian Waters, 1960-2016 and Harvest Advice. DFO Can. Sci. Advis. Sec. Res. Doc. 2017/052. vi + 30 p.
- Harvey, V., M.O. Hammill, D.P. Swain, G.A. Breed, C. Lydersen and K.M. Kovacs. 2012. Winter foraging by a top predator, the grey seal, in relation to the distribution of prey. Marine Ecology Progress Series 462: 273-286.
- Heaslip, S.G., W.D. Bowen, and S.J. Iverson. 2014. Testing predictions of optimal diving theory using animal-borne video from harbour seals (Phoca vitulina). Canadian Journal of Zoology 92:309-318.

- Lidgard, D. C., W. D. Bowen, D. J. Boness. 2012. Longitudinal changes in male physical traits and the implications for mating behaviour and success in a long-lived polygynous mammal, the grey seal. Can. J. Zool. 90:849-860.
- Øigård,T.-A., A.K. Frie, K., T. Nilssen and M.O. Hammill. 2012. Modelling the abundance of grey seals (Halichoerus grypus) along the Norwegian coast. ICES J. of Mar. Sci. 69:1436-1447. doi 10.1093/icesjms/fss103
- Pearson, L.E., H.E.M. Liwang, M.O. Hammill, J.M. Burns. 2014. Shifts in thermoregulatory strategy during ontogeny in harp seals (Pagophilus groenlandicus). J. of Thermal Biology 44:93-102. DOI: 10.1016/j.jtherbio.2014.02.001
- Perry, E., G.B. Stenson & A.D. Buren. 2016. Attendance and nursing patterns of harp seals in the harsh environment of the northwest Atlantic. Polar Biology. DOI: 10.1007/s00300-016-1938-6
- Puryear, Wendy B., M. Keogh, N. Hill, J. Moxley, E. Josephson, K.R. Davis, C. Bandoro, D. Lidgard, A. Bogomolni, M. Levin, Lang S., Hammill, M., Bowen, W.D., Johnston, D.W., Romano, T., Waring, G., and Runstadler. 2016. Prevalence of influenza A virus in live-captured North Atlantic gray seals: a possible wild reservoir. Emerging Microbes and Infections 5. e81; doi:10.1038/emi.2016.77
- Sauvé, C, J. Van de Walle, M.O. Hammill, J.P.Y. Arnould, G. Beauplet. 2014. Stomach Temperature Records Reveal Nursing Behaviour and Transition to Solid Food Consumption in an Unweaned Mammal, the Harbour Seal Pup (Phoca vitulina). PLoS ONE 9(2): e90329. doi:10.1371/journal.pone.0090329
- Sauvé,CC, G Beauplet, MO Hammill, and I Charrier. 2015. Acoustic analysis of airborne, underwater, and amphibious mother attraction calls by wild harbor seal pups (Phoca vitulina). J. of Mammalogy DOI:10.1093/jmammal/gyv064
- Sauvé,CC, G Beauplet, MO Hammill, and I Charrier. 2015. Mother-pup vocal recognition in harbour seals: influence of maternal behaviour, pup voice and habitat sound properties. Animal Behaviour 105:109-120
- Stenson, G. B., D. Wakeham, A. Buren and M. Koen-Alonso. 2014. Density-dependent and density-independent factors influencing reproductive rates in Northwest Atlantic harp seals, Pagophilus groenlandicus. DFO Can. Sci. Advis. Sec. Res. Doc. 2014/058.
- Stenson, G.B. 2012 Report of the Joint NAFO/ICES Working group on Harp and Hooded Seals (WGHARP). NAFO SCS Doc 12/17.
- Stenson, G.B. 2012. Estimating consumption of prey by harp seals, Pagophilus groenlandicus, in NAFO divisions 2J3KL. Canadian Science Advisory Secretariat Res. Doc. 2012/156.
- Stenson, G.B. 2014. The Status of harp and hooded seals in the North Atlantic. NAFO SCR Doc 14/026. N6321.
- Stenson, G.B. 2014. Updated Estimates of Harp Seal Removals in the Northwest Atlantic. DFO Can. Sci. Advis. Sec. Res. Doc. 2014/015. v + 35 p.
- Stenson, G.B. and M.O. Hammill. 2012. Living on the edge: Observations of Northwest Atlantic harp seals in 2010 and 2011. Can. Sci. Advis. Sec. Res. Doc. 2011/108. Iv + 12 p.
- Stenson, G.B. and M.O. Hammill. 2014. Can ice breeding seals adapt to habitat loss in a time of climate change? ICES J. Mar. Sci. doi:10.1093/icesjms/fsu074. Online May 2014.
- Stenson, G.B., A.D. Buren and M. Koen-Alonso. 2016. The impact of changing climate and abundance on reproduction in an ice-dependent species, the Northwest Atlantic harp seal, Pagophilus groenlandicus. ICES. Journal of Marine Science 73:250-262
- Stenson, G.B., M.O. Hammill, J.W. Lawson and J-F. Gosselin. 2014. Estimating pup production of Northwest Atlantic harp seals, Pagophilus groenlandicus, in 2012. DFO Can. Sci. Advis. Sec. Res. Doc. 2014/057.
- Sutherland, D.A., F. Straneo, G. B. Stenson, F. J.M. Davidson, M.O. Hammill, and A. Rosing-Asvid. 2013 Atlantic water variability on the SE Greenland continental shelf and its relationship to SST and bathymetry. J. Geophysical Research: Oceans, 118, 1–9, doi:10.1029/2012JC008354.
- Tucker, S. G. Stenson, W.D. Bowen and S. Iverson. 2013. Fueling phocids: divergent exploitation of primary energy sources and parallel ontogenetic diet switches among three species of sub-arctic seals. Mar. Mammal. Sci. 29(4): E428–E447.

- Ure, D.L., W.D. Bowen, and C.E. den Heyer. 2016. Grey seal population status and trends, Sable Island National Park Reserve, in State of Park Assessment Technical Report
- Weitzman. J., C. den Heyer, and W. D. Bowen 2017. Factors influencing and consequences of breeding dispersal and habitat choice in female grey seals (Halichoerus grypus) on Sable Island, Nova Scotia. Oecologia 183: 367-378, doi:10.1007/s00442-016-3764-5

Whorley, David

From:

Whorley, David

Sent:

Friday, May 10, 2019 10:06 AM

To:

Lester, Brian; D'Aoust, Courtney

Subject:

FW: Seal Memo

Attachments:

Atlantic seals way forward.docx

Importance:

High

Take a look will you?

From: McPherson, Arran < Arran. McPherson@dfo-mpo.gc.ca>

Sent: Friday, May 10, 2019 9:58 AM

To: Nadeau, Simon (NCR) <Simon.Nadeau@dfo-mpo.gc.ca>; Vigneault, Bernard (EC) <bernard.vigneault@canada.ca>;

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Cc: Robinson, Connor < Connor. Robinson@dfo-mpo.gc.ca>; McGill, Stephanie < Stephanie. McGill@dfo-mpo.gc.ca>;

Northcott, Jennifer < Jennifer.Northcott@dfo-mpo.gc.ca>

Subject: Seal Memo **Importance:** High

Hi everyone, I am circulating a draft the Seals memo for your urgent review. I will need to advance this today – but it draws essentially from text previously approved so hopefully, should be quick. Many thanks, Arran.

Arran McPherson, PhD

Assistant Deputy Minister, Ecosystems and Oceans Science Fisheries and Oceans Canada / Government of Canada arran.mcpherson@dfo-mpo.gc.ca / Tel: 613-990-0271

Sous-ministre adjointe Sciences des écosystèmes et des océans Pêches et Océans Canada / Gouvernement du Canada arran.mcpherson@dfo-mpo.gc.ca / Tél. : 613-990-0271



Government of Console Gouvernement du Ceneda Canada

s.19(1)

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page 103



Fisheries and Oceans Canada Pêches et Océans Canada

Deputy Minister

Sous-ministre

UNCLASSIFIED

2019-009-00092 EKME #: 4018006

MEMORANDUM FOR THE MINISTER

ATLANTIC SEAL INITIATIVE - PROPOSED WAY FORWARD (FOR DECISION)

s.19(1) s.21(1)(a) s.21(1)(b)

SUMMARY OF ADVICE TO MINISTER

This note is to recommend a way forward for pinniped science, and particularly the issue of seal predation impacts on key fish stocks on the East coast.

On the East coast, harp seal and grey seal populations are healthy and the subjects of commercial hunts and therefore have been the focus of DFO's pinniped research over the last decades. Harvest of these seal species is significantly lower than established sustainable harvest levels, due to lack of market demand and access for seal products. While there is a consensus about the impact of grey seals on many groundfish species and particularly in the Southern Gulf of St. Lawrence, the science basis available indicate that harp seals do not represent the most important factor limiting cod recovery. However, harvesters are often skeptical of the scientific findings with regards to impacts of seal predation on the species they are harvesting, and may not be aware of all the efforts DFO science has dedicated to this issue.

Departmental officials have had discussion about this
over the last few weeks

DFO committed to providing a summary of our existing activities

A draft of this material is included for your review (TAB 2).



s.19(1) s.21(1)(b)

BACKGROUND

On the East coast, harp seals and grey seals are currently the subject of commercial hunts and therefore have been the focus of DFO's pinniped research (e.g., pinniped diet, impacts on prey populations) over the last decades. While there is a consensus about the impact of grey seals on many groundfish species and particularly in the Southern Gulf of St. Lawrence, the science basis available indicate that harp seals do not represent the most important factor limiting cod recovery.

In Atlantic Canada, commercial harvest of harp seals and grey seals are very limited and small relative to the threshold provided by science to inform sustainable harvest levels; of a possible sustainable harvest of 325,000 harp seal/year, the 2016 harvest amounted to 66,800 individuals.

The small commercial harvest relative to the allowable threshold is likely due to a number of factors, including challenges to domestic and international demand for seal products and international market access barriers or prohibitions. While some seal products appear to have growth potential (i.e. seal oil), significant challenges remain for other products such as seal pelts or meat. DFO's Certification and Market Access Program for Seals (CMAPS) is funding activities by commercial and indigenous applicants to address some of these market-related challenges (last planned funding year 2019-2020). The Atlantic Seal Advisory Committee (ASAC) Indigenous representatives are calling for increased efforts to expand and/or re-open international markets. As well, ASAC representatives and the broader fishing industry still have concerns about seal-related mortality in key commercial fish stocks driven by increasing numbers of seals, in particular grey seals, in the Atlantic.

For grey seal, approximately a decade has passed since DFO Science advice indicated that a 65-70% reduction of the population would be needed to potentially generate a positive impact on the cod population in the Southern Gulf of St. Lawrence. This advice prompted internal government of Canada discussions on possible management measures that could be taken. Numerous unsuccessful attempts were made to obtain approval for targeted removals of grey seals in the Southern Gulf of St. Lawrence. Further to these discussions, efforts focused on market opportunities as a commercial hunt incentive rather than directly reducing seal numbers through interventions.

Numerous fishing industry members have raised concerns about the potential impact of seals on their fisheries.

STRATEGIC CONSIDERATIONS

Departmental officials met with

The focus of these discussions was on the existing science programs on seals in Atlantic Canada. It was acknowledged that the continued DFO science efforts to better understand this issue are also not broadly known.

DFO officials agreed to provid This material has been prepare	e this information I and is attached for your approval (TAB 2).
ADVICE AND RECOMMEN	DATIONS TO MINISTER
ADVICE AND RECOMMENT It is recommended that	approve the distribut
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Jonathan	Wilkinson
Minister	

Minister's Comments:

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Fiche d'acheminement de correspondance Pêches et Océans Canada

UNCLASSIFIED GCCMS #: 2019-009-00092 EKME #: 4018006

To: Pour:	Timothy Sargent	Date:			
Object: Objet:	ATLANTIC SEAL INITIA	TIVE - PROPOSED WAY FOR	RWARD		
From / De:	Bernard Vigneault, DG Ed	cosystem Science			
Via:	Arran McPherson, ADM Ecosystems and Oceans Science				
	al approvals: approbation(s):				
1 1	Material for the Minister Documents pour le Ministre	Your Signature Votre signature	Information		
Remark Remarq		as developed in consultation w ur Management	ith the following		
Drafting Officer/ Rédacte	eur:				

Atlantic Seals and Science at Fisheries & Oceans Canada

Harp seal

The estimate of total number of harp seals in the Northwest Atlantic by DFO is based on surveys of breeding colonies in Winter every 5 years. The total population is estimated using a model that incorporates the number of pups estimated from the aerial surveys, differing reproductive rates and mortality rates for animals of different ages, and factoring in variation in these rates due to different ice conditions as well as harvest amounts. The most recent survey was completed in 2017 and results will be peer reviewed in fall 2019 to update the assessment of the population.

The last (2014) assessment estimated the population to have stabilized at 7.4M animals. Several methods are used to evaluate what seals are eating, which allows to us reduce the uncertainty associated with individual methods. Such methods include analysis of bones/hard parts in stomachs, visual and DNA-based examination of content of digestive tracts and feces, and stable isotopes (allows to see where in the food chain main prey come from). DFO continues to collect additional data on abundance and diets of harp seals in the areas of concern.

Determining the impact of harp seal predation on their prey requires a good understanding of the population dynamics of the prey itself, and in particular, what other factors may be regulating these populations of prey such as the abundance of capelin (a key prey for cod), the presence of other key cod predators, and the environmental conditions impacting cod populations. This information was reviewed in 2014 and was last considered in 2018. Most recently, at the Regional Peer-review of northern cod in March 2019, capelin was found to be an important driver of cod condition, mortality and abundance.

Given the importance of the harp seal predation/lack of cod recovery issue, DFO is planning a peer review in 2020-21 that would aim at updating the information available on harp seal predation, capelin biomass, and cod abundance, and on the other factors that may impact the dynamic of cod stocks. The outcomes of the meeting will include an update of the science basis available on the potential impact of harp seal predation to ensure that the most recent science basis is available to guide future fisheries management decisions.

DFO scientists continue to study and monitor seals to better understand them and their role/impact in the ecosystems. In 2017 and 2018, harp seals off Newfoundland have been equipped with satellite transmitters which provide insights into timing, movements, and foraging behaviour by seals. Examples of the work currently underway include studying the impact of the changing environment on the body condition and reproduction of harp seals, and studying changes in seal diet, including through using DNA-based tools.

A new project starting in 2019-20 aims at determining the importance of harp seal predation on the dynamics of key forage and commercial species (capelin, herring, shrimp) in the Northern Gulf of St. Lawrence (4RS3Pn) and off Newfoundland (2J3KL) through the development of comparable ecosystem models. This project will allow to update seal consumption estimates, construct ecosystem models and better integrate seal consumption into future fish stock assessments.

Grey seal

The grey seal population in Atlantic Canada is surveyed in Winter on breeding beaches every five years. The approach to determine the population size is similar to the approach described for harp seal above. The most recent grey seal survey was completed in 2016 and the population was estimated at 424,300 animals, from an estimated 15,000 in 1960.

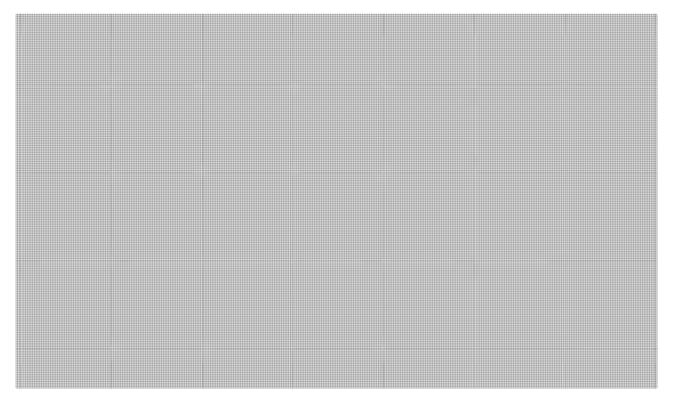
Grey seals diet is very diversified and includes fish, mostly close to the seafloor, taken at depths down to 70 m or more. Their average daily food requirement is estimated to be 5 kg, but animals don't feed during the breeding season.

In October 2010, DFO evaluated the impacts of grey seals on Fish Populations in Eastern Canada. As part of this science advisory process, a number of the potential causes of increased adult Atlantic cod mortality were examined. The conclusions reached were that predation by grey seals was the greatest contributor (50%) to increased mortality in large southern Gulf of St. Lawrence cod. The conclusions of the meeting also indicated that in the Southern Gulf of St. Lawrence, groundfish and skate mortality due to grey seal continue to increase. More recently, there has also been mounting evidence that high grey seal predation may force a redistribution of many groundfish species, into potentially less productive areas.

In contrast, in 2010 DFO concluded that grey seals were not limiting cod recovery off the eastern Scotian shelf. However, grey seal predation on cod was considered important on the Scotian Shelf, and explained slightly less than 25% of the cod mortality. DFO has also worked on evaluating anti-reproduction vaccination to control populations.

Various research projects on grey seal are underway. For example, in 2017-18, grey seals in the Gulf of St. Lawrence have been equipped with satellite transmitters to better understand their distribution and feeding habits. The use of drones to census populations is also being tested as an alternative approach to surveying the population. Breeding and survival rates are also assessed annually.





- s.21(1)(b) Appendix Atlantic seal papers published by DFO from 2012-2017
 - Addison, R.F., Muir, D. C., Ikonomouc, M.G., Harwood, L. Smith, T. G., and Alikamik, J. 2014. Temporal trends in "legacy" organochlorine contaminants in blubber of ringed seals (Phoca hispida) from Ulukhaktok, NT, Canada between 1972 and 2010. Science of the Total Environment 466-467: 564-576. http://dx.doi.org/10.1016/j.scitotenv.2013.07.079.
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 - Andersen, J. M., Wiersma, Y. F., Stenson, G. B., Hammill, M. O., Rosing-Asvid, A., and Skern-Maurizen, M. 2013. Habitat selection by hooded seals (Cystophora cristata) in the Northwest Atlantic Ocean. ICES Journal of Marine Science, 70:173–185.
 - Andersen, J.M, M. Skern-Mauritzen, L. Boehme, Y.F. Wiersma, A. Rosing-Asvid, M.O. Hammill and G.B. Stenson. 2013. Investigating Annual Diving Behaviour by Hooded Seals (Cystophora cristata) within the Northwest Atlantic Ocean. Plos One 8: Article number e80438. DOI 10.1371/journal.pone.0080438
 - Bellehumeur, C., Nielsen, O., Measures, L., Harwood, L., Goldstein, T., Boyle, B., and Gagnon, C. 2015. Herpesviruses including novel gammaherpes viruses are widespread among phocid seal species in Canada. Journal of Wildlife Disease 52 (1): 70-81
 - Bennett, K.A., M. Hammill, and S. Currie. 2013. Liver glucose-6-phosphatase proteins in suckling and weaned grey seal pups: structural similarities to other mammals and relationship to nutrition, insulin signalling and metabolite levels. Journal Of Comparative Physiology B-Biochemical Systemic And Environmental Physiology 183:1075-1088. Doi:10.1007/S00360-013-0768-X
 - Bennett, KA, IS MacMillan, M Hammill, and S Currie. 2014. HSP70 abundance and antioxidant capacity in feeding and fasting gray seal pups: Suckling is associated with higher levels of key cellular defenses. Physiological and Biochemical Zoology 87(5):663–676.
 - Boehme L, Thompson D, Fedak M, Bowen D, Hammill MO, et al. (2012) How Many Seals Were There? The Global Shelf Loss during the Last Glacial Maximum and Its Effect on the Size and Distribution of Grey Seal Populations. PLoS ONE 7(12): e53000. doi:10.1371/journal.pone.0053000
 - Bowen, W. D. 2014. Whale and seal research at BIO through five decades. In VOYAGE OF DISCOVERY, Fifty Years of Marine Research at Canada's Bedford Institute of Oceanography: A commemorative volume in celebration of the 50th anniversary of the Bedford institute of Oceanography Dartmouth, Nova Sotia, Canada, 1962 2012. Ed. David N. Nettleship, D. E., Gordon, D. C., Lewis, M. C. F., and Latremouille, M. P. Pp. 93-102.
 - Bowen, W. D., C. E. den Heyer, McMillan, JI, Iverson SJ. 2015. Offspring size at weaning affects survival to recruitment and reproductive performance of primiparous gray seals. Ecology and Evolution 5(7): 1412-1424
 - Brown, TM, DCG Muir, SH Ferguson, BG Young, AT Fisk, KJ Reimer, X Wang. 2016. Mercury and cadmium in ringed seals in the Canadian Arctic: influence of location and diet. Science of the Total Environment 545–546: 503–511
 - Buren, A. D., M. Koen-Alonso and G. B. Stenson. 2014. The role of harp seals, fisheries and food availability in drive the dynamics of northern cod. Mar. Ecol. Prog. Ser. In Press. Accepted June 2014.
 - Buren, A.D., M. Koen-Alonso, P. Pepin, F. Mowbry, B. Nakashima, G. Stenson, N. Ollerhead, W.A. Montevecchi. 2014. Bottom-up regulation of capelin, a keystone forage species, PLoS One 9(2):e87589. Doi:10.1371/journal.pone.0087589.

- Carr, S.M., A.T. Duggan, G.B. Stenson and H.D. Marshall. 2015. Quantitative phylogenomics of within-species mitogenome variation: Monte Carlo and non-parametric analysis of phylogeographic structure among discrete transatlantic breeding areas of harp seals (Pagophilus groenlandicus). PLoS ONE 10(8): e0134207. doi:10.137/journal.pone.0134207
- Daoust, P.-Y., C. Caraguel, H. Fenton, M. O. Hammill, L. D. Roy, and J. Spears. 2012. Assessment of current and alternative methods for killing young grey seals (Halichoerus grypus) during commercial harvest. DFO Can. Sci. Advis. Sec. Res. Doc. 2012/xxx. iv + xx p. Available at http://www.dfo-mpo.gc.ca/csas.
- Daoust, P.-Y., M. Hammill, G. Stenson and C. Caraguel. 2014. A review of animal welfare implications of the Canadian commercial seal hunt: a critique. Marine Policy. 43:367-371.
- den Heyer, C. E., and W. D. Bowen. 2017. Estimating changes in vital rates of Sable Island grey seals using mark-recapture analysis. DFO Can. Sci. Advis. Sec. Res. Doc. 2017/054. v + 27 p.
- den Heyer, C., W.D. Bowen, and J.I. McMillan. 2013. Long-term changes in grey seal vital rates at Sable Island estimated from POPAN mark-resighting analysis of branded seals. Can. Sci. Advis. Sec. Res. Doc., 2013/21.
- den Heyer, C.E., S.L.C. Lang, W.D. Bowen, and M.O. Hammill. 2017. Pup production at Scotian Shelf grey seal (Halichoerus grypus) colonies in 2016. DFO Can. Sci. Advis. Sec. Res. Doc. 2017/056. v + 35 p.
- Edwards, A.M., Haigh, R., Tallman, R., Swain, D.P., Carruthers, T.R., Cleary, J.S., Stenson, G. and Doniol-Valcroze, T. 2017. Proceedings of the Technical Expertise in Stock Assessment (TESA) National Workshop on 'Incorporating an ecosystem approach into single-species stock assessments' 21-25 November 2016, Nanaimo, British Columbia. Can. Tech. Rep. Fish. Aquat. Sci. 3213: vi + 53 p.
- Frie, A. K., G. Stenson and T. Haug. 2012. Long term trends in reproductive and demographic parameters of female Northwest Atlantic hooded seals (Cystophora cristata (Erxleben, 1777): Population responses to ecosystem change? Can. J. Zool. 90:376-392.
- Frie, A. K., Hammill, M. O., Hauksson, E., Lind, Y., Lockyer, C., Stenman, O., and Svetocheva, O. 2013. Error patterns in age estimation and tooth readability assignment of grey seals (Halichoerus grypus): results from a transatlantic, image-based, blind-reading study using known-age animals. ICES Journal of Marine Science, 70:418-430. doi:10.1093/icesjms/fss169
- Frouin, H., Lebeuf, M., Hammill, M.O., Fournier, M. 2012. Transfer of PBDEs and chlorinated POPs from mother to pup during lactation in harp seals Phoca groenlandica. Science of the Total Environment 417–418 (2012) 98–107
- Hammill M.O., J. Dale, G.B. Stenson, C.E. den Heyer, J-F Gosselin, and D. Johnston. 2016. Comparison of methods to estimate grey seal pup production at different colonies DFO Can. Sci. Advis. Sec. Res Doc. 2017/041. iv + 19 p.
- Hammill, M. O and Stenson, G. B. 2014. Changes in ice conditions and potential impact on harp seal pupping. DFO Can. Sci. Advis. Sec. Res. Doc. 2014/025. iv + 14 p.
- Hammill, M. O. and Stenson, G. B. 2014. Assessing Harp Seals and Providing Advice in a Multiyear Framework. DFO Can. Sci. Advis. Sec. Res. Doc. 2014/038. iv + 22 p.
- Hammill, M. O., den Heyer, C.E. and Bowen, W.D. 2014. Grey Seal Population Trends in Canadian Waters, 1960-2014. DFO Can. Sci. Advis. Sec. Res. Doc. 2014/037. iv + 44 p.
- Hammill, M. O., G. B. Stenson, A. Mosnier and T. Doniol-Valcroze. 2014. Abundance estimates of Northwest Atlantic harp seals and management advice for 2014. DFO Can. Sci. Advis. Sec. Res. Doc. 2014/022.
- Hammill, M.O. and G.B. Stenson. 2013. A Discussion of the Precautionary Approach and its Application to Atlantic Seals. DFO Can. Sci. Advis. Sec.Res. Doc. 2013/030. v + 25 p.

- Hammill, M.O., and C. Sauvé. 2017. Growth and condition in harp seals-evidence of density dependent and density independent influences. ICES J. of Marine Science 74:1395-1407
- Hammill, M.O., C. den Heyer, and W.D. Bowen. 2014. Northwest Atlantic grey seal population trends, 1960-2013. DFO Can. Sci. Advis. Sec. Res. Doc.
- Hammill, M.O., G.B. Stenson, D.P. Swain and H.P. Benoît. 2014. Feeding by grey seals on endangered stocks of Atlantic cod and white hake. ICES J. Mar. Sci. doi:10.1093/icesjms/fsu123
- Hammill, M.O., G.B. Stenson, T. Doniol-Valcroze and A. Mosnier. 2012. Estimating carrying capacity and population trends of Northwest Atlantic harp seals, 1952-2012. Canadian Science Advisory Secretariat Res. Doc. 2012/148. iii + 31 p.
- Hammill, M.O., G.B. Stenson, T. Doniol-Valcroze and A. Mosnier. 2015. Conservation of Northwest Atlantic harp seals: past success, future uncertainty? Biological Conservation. 192:181-191
- Hammill, M.O., J-F. Gosselin and G.B. Stenson. 2017. Pup production of Northwest Atlantic grey seals in the Gulf of St. Lawrence. DFO Can. Sci. Advis. Sec. Res. Doc. 2017/043. iv + 14 p.
- Hammill, M.O., Stenson, G.B. and Mosnier, A. 2016. Science Advice on Theoretical Harvest Reduction Scenarios and Sustainable Catches of NWA harp seals? DFO Can. Sci. Advis. Sec. Res. Doc. 2016/055. v + 32 p.
- Hammill, M.O.,den Heyer, C.E., and Bowen, W.D. 2016. Grey Seal Population Trends in Canadian Waters, 1960-2016 and Harvest Advice. DFO Can. Sci. Advis. Sec. Res. Doc. 2017/052. vi + 30 p.
- Harvey, V., M.O. Hammill, D.P. Swain, G.A. Breed, C. Lydersen and K.M. Kovacs. 2012. Winter foraging by a top predator, the grey seal, in relation to the distribution of prey. Marine Ecology Progress Series 462: 273-286.
- Heaslip, S.G., W.D. Bowen, and S.J. Iverson. 2014. Testing predictions of optimal diving theory using animal-borne video from harbour seals (Phoca vitulina). Canadian Journal of Zoology 92:309-318.
- Lidgard, D. C., W. D. Bowen, D. J. Boness. 2012. Longitudinal changes in male physical traits and the implications for mating behaviour and success in a long-lived polygynous mammal, the grey seal. Can. J. Zool. 90:849-860.
- Øigård,T.-A., A.K. Frie, K., T. Nilssen and M.O. Hammill. 2012. Modelling the abundance of grey seals (Halichoerus grypus) along the Norwegian coast. ICES J. of Mar. Sci. 69:1436-1447. doi 10.1093/icesjms/fss103
- Pearson, L.E., H.E.M. Liwang, M.O. Hammill, J.M. Burns. 2014. Shifts in thermoregulatory strategy during ontogeny in harp seals (Pagophilus groenlandicus). J. of Thermal Biology 44:93-102. DOI: 10.1016/j.itherbio.2014.02.001
- Perry, E., G.B. Stenson & A.D. Buren. 2016. Attendance and nursing patterns of harp seals in the harsh environment of the northwest Atlantic. Polar Biology. DOI: 10.1007/s00300-016-1938-6
- Puryear, Wendy B., M. Keogh, N. Hill, J. Moxley, E. Josephson, K.R. Davis, C. Bandoro, D. Lidgard, A. Bogomolni, M. Levin, Lang S., Hammill, M., Bowen, W.D., Johnston, D.W., Romano, T., Waring, G., and Runstadler. 2016. Prevalence of influenza A virus in live-captured North Atlantic gray seals: a possible wild reservoir. Emerging Microbes and Infections 5. e81; doi:10.1038/emi.2016.77
- Sauvé, C, J. Van de Walle, M.O. Hammill, J.P.Y. Arnould, G. Beauplet. 2014. Stomach Temperature Records Reveal Nursing Behaviour and Transition to Solid Food Consumption in an Unweaned Mammal, the Harbour Seal Pup (Phoca vitulina). PLoS ONE 9(2): e90329. doi:10.1371/journal.pone.0090329

- Sauvé, CC, G Beauplet, MO Hammill, and I Charrier. 2015. Acoustic analysis of airborne, underwater, and amphibious mother attraction calls by wild harbor seal pups (Phoca vitulina). J. of Mammalogy DOI:10.1093/jmammal/gyv064
- Sauvé, CC, G Beauplet, MO Hammill, and I Charrier. 2015. Mother-pup vocal recognition in harbour seals: influence of maternal behaviour, pup voice and habitat sound properties. Animal Behaviour 105:109-120
- Stenson, G. B., D. Wakeham, A. Buren and M. Koen-Alonso. 2014. Density-dependent and density-independent factors influencing reproductive rates in Northwest Atlantic harp seals, Pagophilus groenlandicus. DFO Can. Sci. Advis. Sec. Res. Doc. 2014/058.
- Stenson, G.B. 2012 Report of the Joint NAFO/ICES Working group on Harp and Hooded Seals (WGHARP). NAFO SCS Doc 12/17.
- Stenson, G.B. 2012. Estimating consumption of prey by harp seals, Pagophilus groenlandicus, in NAFO divisions 2J3KL. Canadian Science Advisory Secretariat Res. Doc. 2012/156.
- Stenson, G.B. 2014. The Status of harp and hooded seals in the North Atlantic. NAFO SCR Doc 14/026. N6321.
- Stenson, G.B. 2014. Updated Estimates of Harp Seal Removals in the Northwest Atlantic. DFO Can. Sci. Advis. Sec. Res. Doc. 2014/015. v + 35 p.
- Stenson, G.B. and M.O. Hammill. 2012. Living on the edge: Observations of Northwest Atlantic harp seals in 2010 and 2011. Can. Sci. Advis. Sec. Res. Doc. 2011/108. Iv + 12 p.
- Stenson, G.B. and M.O. Hammill. 2014. Can ice breeding seals adapt to habitat loss in a time of climate change? ICES J. Mar. Sci. doi:10.1093/icesjms/fsu074. Online May 2014.
- Stenson, G.B., A.D. Buren and M. Koen-Alonso. 2016. The impact of changing climate and abundance on reproduction in an ice-dependent species, the Northwest Atlantic harp seal, Pagophilus groenlandicus. ICES. Journal of Marine Science 73:250-262
- Stenson, G.B., M.O. Hammill, J.W. Lawson and J-F. Gosselin. 2014. Estimating pup production of Northwest Atlantic harp seals, Pagophilus groenlandicus, in 2012. DFO Can. Sci. Advis. Sec. Res. Doc. 2014/057.
- Sutherland, D.A., F. Straneo, G. B. Stenson, F. J.M. Davidson, M.O. Hammill, and A. Rosing-Asvid. 2013 Atlantic water variability on the SE Greenland continental shelf and its relationship to SST and bathymetry. J. Geophysical Research: Oceans, 118, 1–9, doi:10.1029/2012JC008354.
- Tucker, S. G. Stenson, W.D. Bowen and S. Iverson. 2013. Fueling phocids: divergent exploitation of primary energy sources and parallel ontogenetic diet switches among three species of sub-arctic seals. Mar. Mammal. Sci. 29(4): E428–E447.
- Ure, D.L., W.D. Bowen, and C.E. den Heyer. 2016. Grey seal population status and trends, Sable Island National Park Reserve, in State of Park Assessment Technical Report
- Weitzman. J., C. den Heyer, and W. D. Bowen 2017. Factors influencing and consequences of breeding dispersal and habitat choice in female grey seals (Halichoerus grypus) on Sable Island, Nova Scotia. Oecologia 183: 367-378, doi:10.1007/s00442-016-3764-5

Whorley, David

From: Nadeau, Simon (NCR)

Sent: Friday, May 10, 2019 11:00 AM

To: McPherson, Arran; Vigneault, Bernard (EC); Burns, Adam; Whorley, David Robinson, Connor; McGill, Stephanie; Northcott, Jennifer; Landry, Jean

Subject: RE: Seal Memo

Attachments: Atlantic seals way forward.docx

Fine by me. I added 2 references to the list of publications.

Simon Nadeau

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Envoyé: 10 mai 2019 09:58

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Objet: Seal Memo Importance: Haute

Hi everyone, I am circulating a draft the Seals memo for your urgent review. I will need to advance this today — but it draws essentially from text previously approved so hopefully, should be quick. Many thanks, Arran.

Arran McPherson, PhD

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TAB 2

Atlantic Seals and Science at Fisheries & Oceans Canada

Harp seal

The estimate of total number of harp seals in the Northwest Atlantic by DFO is based on surveys of breeding colonies in Winter every 5 years. The total population is estimated using a model that incorporates the number of pups estimated from the aerial surveys, differing reproductive rates and mortality rates for animals of different ages, and factoring in variation in these rates due to different ice conditions as well as harvest amounts. The most recent survey was completed in 2017 and results will be peer reviewed in fall 2019 to update the assessment of the population.

The last (2014) assessment estimated the population to have stabilized at 7.4M animals. Several methods are used to evaluate what seals are eating, which allows to us reduce the uncertainty associated with individual methods. Such methods include analysis of bones/hard parts in stomachs, visual and DNA-based examination of content of digestive tracts and feces, and stable isotopes (allows to see where in the food chain main prey come from). DFO continues to collect additional data on abundance and diets of harp seals in the areas of concern.

Determining the impact of harp seal predation on their prey requires a good understanding of the population dynamics of the prey itself, and in particular, what other factors may be regulating these populations of prey such as the abundance of capelin (a key prey for cod), the presence of other key cod predators, and the environmental conditions impacting cod populations. This information was reviewed in 2014 and was last considered in 2018. Most recently, at the Regional Peer-review of northern cod in March 2019, capelin was found to be an important driver of cod condition, mortality and abundance.

Given the importance of the harp seal predation/lack of cod recovery issue, DFO is planning a peer review in 2020-21 that would aim at updating the information available on harp seal predation, capelin biomass, and cod abundance, and on the other factors that may impact the dynamic of cod stocks. The outcomes of the meeting will include an update of the science basis available on the potential impact of harp seal predation to ensure that the most recent science basis is available to guide future fisheries management decisions.

DFO scientists continue to study and monitor seals to better understand them and their role/impact in the ecosystems. In 2017 and 2018, harp seals off Newfoundland have been equipped with satellite transmitters which provide insights into timing, movements, and foraging behaviour by seals. Examples of the work currently underway include studying the impact of the changing environment on the body condition and reproduction of harp seals, and studying changes in seal diet, including through using DNA-based tools.

A new project starting in 2019-20 aims at determining the importance of harp seal predation on the dynamics of key forage and commercial species (capelin, herring, shrimp) in the Northern Gulf of St. Lawrence (4RS3Pn) and off Newfoundland (2J3KL) through the development of comparable ecosystem models. This project will allow to update seal consumption estimates, construct ecosystem models and better integrate seal consumption into future fish stock assessments.

Grey seal

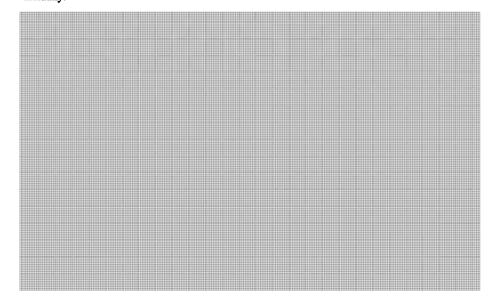
The grey seal population in Atlantic Canada is surveyed in Winter on breeding beaches every five years. The approach to determine the population size is similar to the approach described for harp seal above. The most recent grey seal survey was completed in 2016 and the population was estimated at 424,300 animals, from an estimated 15,000 in 1960.

Grey seals diet is very diversified and includes fish, mostly close to the seafloor, taken at depths down to 70 m or more. Their average daily food requirement is estimated to be 5 kg, but animals don't feed during the breeding season.

In October 2010, DFO evaluated the impacts of grey seals on Fish Populations in Eastern Canada. As part of this science advisory process, a number of the potential causes of increased adult Atlantic cod mortality were examined. The conclusions reached were that predation by grey seals was the greatest contributor (50%) to increased mortality in large southern Gulf of St. Lawrence cod. The conclusions of the meeting also indicated that in the Southern Gulf of St. Lawrence, groundfish and skate mortality due to grey seal continue to increase. More recently, there has also been mounting evidence that high grey seal predation may force a redistribution of many groundfish species, into potentially less productive areas.

In contrast, in 2010 DFO concluded that grey seals were not limiting cod recovery off the eastern Scotian shelf. However, grey seal predation on cod was considered important on the Scotian Shelf, and explained slightly less than 25% of the cod mortality. DFO has also worked on evaluating anti-reproduction vaccination to control populations.

Various research projects on grey seal are underway. For example, in 2017-18, grey seals in the Gulf of St. Lawrence have been equipped with satellite transmitters to better understand their distribution and feeding habits. The use of drones to census populations is also being tested as an alternative approach to surveying the population. Breeding and survival rates are also assessed annually.



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Appendix - Atlantic seal papers published by DFO from 2012-2017

- Addison, R.F., Muir, D. C., Ikonomouc, M.G., Harwood, L. Smith, T. G., and Alikamik, J. 2014. Temporal trends in "legacy" organochlorine contaminants in blubber of ringed seals (Phoca hispida) from Ulukhaktok, NT, Canada between 1972 and 2010. Science of the Total Environment 466-467: 564-576. http://dx.doi.org/10.1016/j.scitotenv.2013.07.079.
- Andersen JM, Stenson GB, Skern-Maurizen M, Wiersma YF, Rosing-Asvid A, MO Hammill and L Boehme . 2014. Drift Diving by Hooded Seals (Cystophora cristata) in the Northwest Atlantic Ocean. PLoS ONE 9(7): e103072. doi:10.1371/journal.pone.0103072
- Andersen, J. M., Wiersma, Y. F., Stenson, G. B., Hammill, M. O., Rosing-Asvid, A., and Skern-Maurizen, M. 2013. Habitat selection by hooded seals (Cystophora cristata) in the Northwest Atlantic Ocean. ICES Journal of Marine Science, 70:173–185.
- Andersen, J.M, M. Skern-Mauritzen, L. Boehme, Y.F. Wiersma, A. Rosing-Asvid, M.O. Hammill and G.B. Stenson. 2013. Investigating Annual Diving Behaviour by Hooded Seals (Cystophora cristata) within the Northwest Atlantic Ocean. Plos One 8: Article number e80438. DOI 10.1371/journal.pone.0080438
- Bellehumeur, C., Nielsen, O., Measures, L., Harwood, L., Goldstein, T., Boyle, B., and Gagnon, C. 2015. Herpesviruses including novel gammaherpes viruses are widespread among phocid seal species in Canada. Journal of Wildlife Disease 52 (1): 70-81
- Bennett, K.A., M. Hammill, and S. Currie. 2013. Liver glucose-6-phosphatase proteins in suckling and weaned grey seal pups: structural similarities to other mammals and relationship to nutrition, insulin signalling and metabolite levels. Journal Of Comparative Physiology B-Biochemical Systemic And Environmental Physiology 183:1075-1088. Doi:10.1007/S00360-013-0768-X
- Bennett, KA, IS MacMillan, M Hammill, and S Currie. 2014. HSP70 abundance and antioxidant capacity in feeding and fasting gray seal pups: Suckling is associated with higher levels of key cellular defenses. Physiological and Biochemical Zoology 87(5):663–676.
- Boehme L, Thompson D, Fedak M, Bowen D, Hammill MO, et al. (2012) How Many Seals Were There? The Global Shelf Loss during the Last Glacial Maximum and Its Effect on the Size and Distribution of Grey Seal Populations. PLoS ONE 7(12): e53000. doi:10.1371/journal.pone.0053000
- Bousquet, E. Chassot, D.E. Duplisea, and Mike O. Hammill. 2014. Forecasting the Major Influences of Predation and Environment on Cod Recovery in the Northern Gulf of St. Lawrence, PLoS ONE 9(2): e82836, doi:10.1371/journal.pone.0082836
- Bowen, W. D. 2014. Whale and seal research at BIO through five decades. In VOYAGE OF DISCOVERY, Fifty Years of Marine Research at Canada's Bedford Institute of Oceanography: A commemorative volume in celebration of the 50th anniversary of the Bedford institute of Oceanography Dartmouth, Nova Sotia, Canada, 1962 2012. Ed. David N. Nettleship, D. E., Gordon, D. C., Lewis, M. C. F., and Latremouille, M. P. Pp. 93-102.
- Bowen, W. D., C. E. den Heyer, McMillan, JI, Iverson SJ. 2015. Offspring size at weaning affects survival to recruitment and reproductive performance of primiparous gray seals. Ecology and Evolution 5(7): 1412-1424
- Brown, TM, DCG Muir, SH Ferguson, BG Young, AT Fisk, KJ Reimer, X Wang. 2016.
 Mercury and cadmium in ringed seals in the Canadian Arctic: influence of location and diet.
 Science of the Total Environment 545-546: 503-511
- Buren, A. D., M. Koen-Alonso and G. B. Stenson. 2014. The role of harp seals, fisheries and food availability in drive the dynamics of northern cod. Mar. Ecol. Prog. Ser. In Press. Accepted June 2014.

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- Buren, A.D., M. Koen-Alonso, P. Pepin, F. Mowbry, B. Nakashima, G. Stenson, N. Ollerhead, W.A. Montevecchi. 2014. Bottom-up regulation of capelin, a keystone forage species, PLoS One 9(2):e87589. Doi:10.1371/journal.pone.0087589.
- Carr, S.M., A.T. Duggan, G.B. Stenson and H.D. Marshall. 2015. Quantitative phylogenomics of within-species mitogenome variation: Monte Carlo and non-parametric analysis of phylogeographic structure among discrete transatlantic breeding areas of harp seals (Pagophilus groenlandicus). PLoS ONE 10(8): e0134207. doi:10.137/journal.pone.0134207
- Daoust, P.-Y., C. Caraguel, H. Fenton, M. O. Hammill, L. D. Roy, and J. Spears. 2012. Assessment of current and alternative methods for killing young grey seals (Halichoerus grypus) during commercial harvest. DFO Can. Sci. Advis. Sec. Res. Doc. 2012/xxx. iv + xx p. Available at http://www.dfo-mpo.gc.ca/csas.
- Daoust, P.-Y., M. Hammill, G. Stenson and C. Caraguel. 2014. A review of animal welfare implications of the Canadian commercial seal hunt: a critique. Marine Policy. 43:367-371.
- den Heyer, C. E., and W. D. Bowen. 2017. Estimating changes in vital rates of Sable Island grey seals using mark-recapture analysis. DFO Can. Sci. Advis. Sec. Res. Doc. 2017/054. v + 27 p.
- den Heyer, C., W.D. Bowen, and J.I. McMillan. 2013. Long-term changes in grey seal vital rates at Sable Island estimated from POPAN mark-resighting analysis of branded seals. Can. Sci. Advis. Sec. Res. Doc., 2013/21.
- den Heyer, C.E., S.L.C. Lang, W.D. Bowen, and M.O. Hammill. 2017. Pup production at Scotian Shelf grey seal (Halichoerus grypus) colonies in 2016. DFO Can. Sci. Advis. Sec. Res. Doc. 2017/056. v + 35 p.
- Edwards, A.M., Haigh, R., Tallman, R., Swain, D.P., Carruthers, T.R., Cleary, J.S., Stenson, G. and Doniol-Valcroze, T. 2017. Proceedings of the Technical Expertise in Stock Assessment (TESA) National Workshop on 'Incorporating an ecosystem approach into single-species stock assessments' 21-25 November 2016, Nanaimo, British Columbia. Can. Tech. Rep. Fish. Aquat. Sci. 3213: vi + 53 p.
- Frie, A. K., G. Stenson and T. Haug. 2012. Long term trends in reproductive and demographic parameters of female Northwest Atlantic hooded seals (Cystophora cristata (Erxleben, 1777): Population responses to ecosystem change? Can. J. Zool. 90:376-392.
- Frie, A. K., Hammill, M. O., Hauksson, E., Lind, Y., Lockyer, C., Stenman, O., and Svetocheva, O. 2013. Error patterns in age estimation and tooth readability assignment of grey seals (Halichoerus grypus): results from a transatlantic, image-based, blind-reading study using known-age animals. ICES Journal of Marine Science, 70:418-430. doi:10.1093/icesjms/fss169
- Frouin, H., Lebeuf, M., Hammill, M.O., Fournier, M. 2012. Transfer of PBDEs and chlorinated POPs from mother to pup during lactation in harp seals Phoca groenlandica. Science of the Total Environment 417–418 (2012) 98–107
- Hammill M.O., J. Dale, G.B. Stenson, C.E. den Heyer, J-F Gosselin, and D. Johnston. 2016. Comparison of methods to estimate grey seal pup production at different colonies DFO Can. Sci. Advis. Sec. Res Doc. 2017/041. iv + 19 p.
- Hammill, M. O and Stenson, G. B. 2014. Changes in ice conditions and potential impact on harp seal pupping. DFO Can. Sci. Advis. Sec. Res. Doc. 2014/025. iv + 14 p.
- Hammill, M. O. and Stenson, G. B. 2014. Assessing Harp Seals and Providing Advice in a Multiyear Framework. DFO Can. Sci. Advis. Sec. Res. Doc. 2014/038. iv + 22 p.
- Hammill, M. O., den Heyer, C.E. and Bowen, W.D. 2014. Grey Seal Population Trends in Canadian Waters, 1960-2014. DFO Can. Sci. Advis. Sec. Res. Doc. 2014/037. iv + 44 p.
- Hammill, M. O., G. B. Stenson, A. Mosnier and T. Doniol-Valcroze. 2014. Abundance estimates of Northwest Atlantic harp seals and management advice for 2014. DFO Can. Sci. Advis. Sec. Res. Doc. 2014/022.

- Hammill, M.O. and G.B. Stenson. 2013. A Discussion of the Precautionary Approach and its Application to Atlantic Seals. DFO Can. Sci. Advis. Sec.Res. Doc. 2013/030. v + 25 p.
- Hammill, M.O., and C. Sauvé. 2017. Growth and condition in harp seals-evidence of density dependent and density independent influences. ICES J. of Marine Science 74:1395-1407
- Hammill, M.O., C. den Heyer, and W.D. Bowen. 2014. Northwest Atlantic grey seal population trends, 1960-2013. DFO Can. Sci. Advis. Sec. Res. Doc.
- Hammill, M.O., G.B. Stenson, D.P. Swain and H.P. Benoît. 2014. Feeding by grey seals on endangered stocks of Atlantic cod and white hake. ICES J. Mar. Sci. doi:10.1093/icesims/fsu123
- Hammill, M.O., G.B. Stenson, T. Doniol-Valcroze and A. Mosnier. 2012. Estimating carrying capacity and population trends of Northwest Atlantic harp seals, 1952-2012. Canadian Science Advisory Secretariat Res. Doc. 2012/148. iii + 31 p.
- Hammill, M.O., G.B. Stenson, T. Doniol-Valcroze and A. Mosnier. 2015. Conservation of Northwest Atlantic harp seals: past success, future uncertainty? Biological Conservation. 192:181-191
- Hammill, M.O., J-F. Gosselin and G.B. Stenson. 2017. Pup production of Northwest Atlantic grey seals in the Gulf of St. Lawrence. DFO Can. Sci. Advis. Sec. Res. Doc. 2017/043. iv + 14 p.
- Hammill, M.O., Stenson, G.B. and Mosnier, A. 2016. Science Advice on Theoretical Harvest Reduction Scenarios and Sustainable Catches of NWA harp seals? DFO Can. Sci. Advis. Sec. Res. Doc. 2016/055. v + 32 p.
- Hammill, M.O.,den Heyer, C.E., and Bowen, W.D. 2016. Grey Seal Population Trends in Canadian Waters, 1960-2016 and Harvest Advice. DFO Can. Sci. Advis. Sec. Res. Doc. 2017/052. vi + 30 p.
- Harvey, V., M.O. Hammill, D.P. Swain, G.A. Breed, C. Lydersen and K.M. Kovacs. 2012.
 Winter foraging by a top predator, the grey seal, in relation to the distribution of prey. Marine Ecology Progress Series 462: 273-286.
- Heaslip, S.G., W.D. Bowen, and S.J. Iverson. 2014. Testing predictions of optimal diving theory using animal-borne video from harbour seals (Phoca vitulina). Canadian Journal of Zoology 92:309-318.
- Lidgard, D. C., W. D. Bowen, D. J. Boness. 2012. Longitudinal changes in male physical traits and the implications for mating behaviour and success in a long-lived polygynous mammal, the grey seal. Can. J. Zool. 90:849-860.
- Øigård, T.-A., A.K. Frie, K., T. Nilssen and M.O. Hammill. 2012. Modelling the abundance of grey seals (Halichoerus grypus) along the Norwegian coast. ICES J. of Mar. Sci. 69:1436-1447. doi 10.1093/icesjms/fss103
- Pearson, L.E., H.E.M. Liwang, M.O. Hammill, J.M. Burns. 2014. Shifts in thermoregulatory strategy during ontogeny in harp seals (Pagophilus groenlandicus). J. of Thermal Biology 44:93-102. DOI: 10.1016/j.jtherbio.2014.02.001
- Perry, E., G.B. Stenson & A.D. Buren. 2016. Attendance and nursing patterns of harp seals in the harsh environment of the northwest Atlantic. Polar Biology. DOI: 10.1007/s00300-016-1938-6
- Puryear, Wendy B., M. Keogh, N. Hill, J. Moxley, E. Josephson, K.R. Davis, C. Bandoro, D. Lidgard, A. Bogomolni, M. Levin, Lang S., Hammill, M., Bowen, W.D., Johnston, D.W., Romano, T., Waring, G., and Runstadler. 2016. Prevalence of influenza A virus in live-captured North Atlantic gray seals: a possible wild reservoir. Emerging Microbes and Infections 5. e81; doi:10.1038/emi.2016.77
- Sauvé, C, J. Van de Walle, M.O. Hammill, J.P.Y. Arnould, G. Beauplet. 2014. Stomach Temperature Records Reveal Nursing Behaviour and Transition to Solid Food Consumption

- in an Unweaned Mammal, the Harbour Seal Pup (Phoca vitulina). PLoS ONE 9(2): e90329. doi:10.1371/journal.pone.0090329
- Sauvé, CC, G Beauplet, MO Hammill, and I Charrier. 2015. Acoustic analysis of airborne, underwater, and amphibious mother attraction calls by wild harbor seal pups (Phoca vitulina). J. of Mammalogy DOI:10.1093/jmammal/gyv064
- Sauvé, CC, G Beauplet, MO Hammill, and I Charrier. 2015. Mother-pup vocal recognition in harbour seals: influence of maternal behaviour, pup voice and habitat sound properties. Animal Behaviour 105:109-120
- Stenson, G. B., D. Wakeham, A. Buren and M. Koen-Alonso. 2014. Density-dependent and density-independent factors influencing reproductive rates in Northwest Atlantic harp seals, Pagophilus groenlandicus. DFO Can. Sci. Advis. Sec. Res. Doc. 2014/058.
- Stenson, G.B. 2012 Report of the Joint NAFO/ICES Working group on Harp and Hooded Seals (WGHARP). NAFO SCS Doc 12/17.
- Stenson, G.B. 2012. Estimating consumption of prey by harp seals, Pagophilus groenlandicus, in NAFO divisions 2J3KL. Canadian Science Advisory Secretariat Res. Doc. 2012/156.
- Stenson, G.B. 2014. The Status of harp and hooded seals in the North Atlantic. NAFO SCR Doc 14/026. N6321.
- Stenson, G.B. 2014. Updated Estimates of Harp Seal Removals in the Northwest Atlantic. DFO Can. Sci. Advis. Sec. Res. Doc. 2014/015. v + 35 p.
- Stenson, G.B. and M.O. Hammill. 2012. Living on the edge: Observations of Northwest Atlantic harp seals in 2010 and 2011. Can. Sci. Advis. Sec. Res. Doc. 2011/108. Iv + 12 p.
- Stenson, G.B. and M.O. Hammill. 2014. Can ice breeding seals adapt to habitat loss in a time of climate change? ICES J. Mar. Sci. doi:10.1093/icesjms/fsu074. Online May 2014.
- Stenson, G.B., A.D. Buren and M. Koen-Alonso. 2016. The impact of changing climate and abundance on reproduction in an ice-dependent species, the Northwest Atlantic harp seal, Pagophilus groenlandicus. ICES. Journal of Marine Science 73:250-262
- Stenson, G.B., M.O. Hammill, J.W. Lawson and J-F. Gosselin. 2014. Estimating pup production of Northwest Atlantic harp seals, Pagophilus groenlandicus, in 2012. DFO Can. Sci. Advis. Sec. Res. Doc. 2014/057.
- Sutherland, D.A., F. Straneo, G. B. Stenson, F. J.M. Davidson, M.O. Hammill, and A. Rosing-Asvid. 2013 Atlantic water variability on the SE Greenland continental shelf and its relationship to SST and bathymetry. J. Geophysical Research: Oceans, 118, 1-9, doi:10.1029/2012JC008354.
- Swain, D.P., H.P. Benoit, and M.O. Hammill. 2015. Spatial distribution of fishes in a Northwest Atlantic ecosystem in relation to risk of predation by a marine mammal. J. Animal Ecol. 84, 1286–1298
- Tucker, S. G. Stenson, W.D. Bowen and S. Iverson. 2013. Fueling phocids: divergent exploitation of primary energy sources and parallel ontogenetic diet switches among three species of sub-arctic seals. Mar. Mammal. Sci. 29(4): E428–E447.
- Ure, D.L., W.D. Bowen, and C.E. den Heyer. 2016. Grey seal population status and trends, Sable Island National Park Reserve, in State of Park Assessment Technical Report
- Weitzman. J., C. den Heyer, and W. D. Bowen 2017. Factors influencing and consequences of breeding dispersal and habitat choice in female grey seals (Halichoerus grypus) on Sable Island, Nova Scotia. Oecologia 183: 367-378, doi:10.1007/s00442-016-3764-5

Whorley, David

From:

D'Aoust, Courtney

Sent:

Friday, May 10, 2019 11:26 AM Whorley, David; Lester, Brian

To: Subject:

RE: Seal Memo

Attachments:

Atlantic seals way forward.docx

Importance:

High

Hi Brian and David, please find attached some comments for your consideration.

From: Whorley, David <David.Whorley@dfo-mpo.gc.ca>

Sent: Friday, May 10, 2019 10:06 AM

To: Lester, Brian <Brian.Lester@dfo-mpo.gc.ca>; D'Aoust, Courtney <Courtney.D'aoust@dfo-mpo.gc.ca>

Subject: FW: Seal Memo

Importance: High

Take a look will you?

From: McPherson, Arran < Arran.McPherson@dfo-mpo.gc.ca>

Sent: Friday, May 10, 2019 9:58 AM

To: Nadeau, Simon (NCR) < Simon.Nadeau@dfo-mpo.gc.ca>; Vigneault, Bernard (EC) < bernard.vigneault@canada.ca>;

Burns, Adam < Adam.Burns@dfo-mpo.gc.ca>; Whorley, David < David.Whorley@dfo-mpo.gc.ca>

Cc: Robinson, Connor < Connor.Robinson@dfo-mpo.gc.ca >; McGill, Stephanie < Stephanie.McGill@dfo-mpo.gc.ca >;

Northcott, Jennifer < Jennifer.Northcott@dfo-mpo.gc.ca>

Subject: Seal Memo Importance: High

Hi everyone, I am circulating a draft the Seals memo for your urgent review. I will need to advance this today — but it draws essentially from text previously approved so hopefully, should be quick. Many thanks, Arran.

Arran McPherson, PhD

Assistant Deputy Minister, Ecosystems and Oceans Science Fisheries and Oceans Canada / Government of Canada arran.mcpherson@dfo-mpo.gc.ca / Tel: 613-990-0271

Sous-ministre adjointe Sciences des écosystèmes et des océans Pêches et Océans Canada / Gouvernement du Canada arran.mcpherson@dfo-mpo.qc.ca / Tél.: 613-990-0271



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Fisheries and Oceans Canada Pêches et Océans Canada

Deputy Minister

Sous-ministre

UNCLASSIFIED

2019-009-00092 EKME #: 4018006

MEMORANDUM FOR THE MINISTER

ATLANTIC SEAL INITIATIVE - PROPOSED WAY FORWARD (FOR DECISION)

SUMMARY OF ADVICE TO MINISTER s.19(1)This note is to recommend a way forward for pinniped science, and particularly the issue of s.21(1)(a) seal predation impacts on key fish stocks on the East coast. s.21(1)(b) On the East coast, harp seal and grey seal populations are healthy and the subjects of commercial hunts and therefore have been the focus of DFO's pinniped research over the last decades. Harvest of these seal species is significantly lower than established sustainable harvest levels, due to lack of market demand and access for seal products. While there is a consensus about the impact of grey seals on many groundfish species and particularly in the Southern Gulf of St. Lawrence, the science basis available indicate that harp seals do not represent the most important factor limiting cod recovery. However, harvesters are often skeptical of the scientific findings with regards to impacts of seal predation on the species they are harvesting, and may not be aware of all the efforts DFO science has dedicated to this issue. Departmental officials have had discussion about this over the last few weeks DFO committed to providing a summary of our existing Commented [DC1]: activities A draft of this material is included for your review (TAB 2). Commented [DC2]:

Canad'ä

.../2

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-2-

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BACKGROUND

On the East coast, harp seals and grey seals are currently the subject of commercial hunts and therefore have been the focus of DFO's pinniped research (e.g., pinniped diet, impacts on prey populations) over the last decades. While there is a consensus about the impact of grey seals on many groundfish species and particularly in the Southern Gulf of St. Lawrence, the science basis available indicate that harp seals do not represent the most important factor limiting cod recovery.

In Atlantic Canada, commercial harvest of harp seals and grey seals are very limited and small relative to the threshold provided by science to inform sustainable harvest levels; of a possible sustainable harvest of 325,000 harp seal/year, the 2016 harvest amounted to 66,800 individuals.

The small commercial harvest relative to the allowable threshold is likely due to a number of factors, including challenges to domestic and international demand for seal products and international market access barriers or prohibitions. While some seal products appear to have growth potential (i.e. seal oil), significant challenges remain for other products such as seal pelts or meat. DFO's Certification and Market Access Program for Seals (CMAPS) is funding activities by commercial and indigenous applicants to address some of these market-related challenges (last planned funding year 2019-2020). The Atlantic Seal Advisory Committee (ASAC) Indigenous representatives are calling for increased efforts to expand and/or re-open international markets. As well, ASAC representatives and the broader fishing industry still have concerns about seal-related mortality in key commercial fish stocks driven by increasing numbers of seals, in particular grey seals, in the Atlantic.

For grey seal, approximately a decade has passed since DFO Science advice indicated that a 65-70% reduction of the population would be needed to potentially generate a positive impact on the cod population in the Southern Gulf of St. Lawrence. This advice prompted internal government of Canada discussions on possible management measures that could be taken. Numerous unsuccessful attempts were made to obtain approval for targeted removals of grey seals in the Southern Gulf of St. Lawrence. Further to these discussions, efforts focused on market opportunities as a commercial hunt incentive rather than directly reducing seal numbers through interventions.

Numerous fishing industry members have raised concerns about the potential impact of seals on their fisheries.

STRATEGIC CONSIDERATIONS

Departmental officials met with

The focus of these discussions was on the existing science programs on seals in Atlantic Canada. It was acknowledged that the continued DFO science efforts to better understand this issue are also not broadly known.

Commented [DC3]: Landings data was recently updated by Stats, shows slightly higher total for 2016:

2016 harps- 68,360 2017 harps- 81,746 2018 harps - 61,085

s.19(1)

s.21(1)(b)

.../3

2019-009-00092- Atlantic Seal Institutive - Proposed Way Forward

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	-3- UN	CLASSIFIED	
DFO officials agreed to provide this in his material has been prepared and is	formation attached for your approval (TAB 2).		s.19(1) s.21(1)(a) s.21(1)(b)
		Commei	nted [DC5]:
is recommended that	approve the dis		nted [DC6]:
t is recommended that he enclosed Science summary (TAB 2	approve the dis		nted [DC6]:
t is recommended that the enclosed Science summary (TAB 2) Timothy Sargent Deputy Minister I concur with the recommendat I do not concur with the recommendat	Revin Stringer Associate Deputy Minister		nted [DC6]:

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	- 4 -	UNCLASSIFIED	
Jonathan Wilkinson Minister			
Minister's Comments:			
	No information ha	s been removed or severed from this page	
	,		
2019-009-00092- Atlantic Seal Initiative - Propo	osed Way Forward		

Nadeau, Simon (NCR)

De:

Charron, Gizanne

Envoyé:

13 mai 2019 13:43

À:

Young, Susan

Cc:

Nadeau, Simon (NCR)

Objet:

FW: Seal Memo

Pièces jointes:

Atlantic seals way forward.docx

Importance:

Haute

s.19(1)

Catégories:

Important

Hi Susan,

Simon from Marine Mammal Science Branch was inquiring on the status of this memo and was wondering on if changes will need to be made?

Thank you

Gizanne

From: Nadeau, Simon (NCR) <Simon.Nadeau@dfo-mpo.gc.ca>

Sent: Monday, May 13, 2019 1:35 PM

To: Charron, Gizanne < Gizanne.Charron@dfo-mpo.gc.ca> **Cc:** D'Amours, Kristen < Kristen.D'amours@dfo-mpo.gc.ca>

Subject: TR: Seal Memo

Importance: High

Gizanne, as discussed. Let us know if we have to make changes to the memo or what its status is.

Merci

Simon Nadeau

Manager/Gestionnaire

Marine Mammals Science/Science des mammifères marins

Ecosystem Science Directorate/Direction de la science des écosystèmes

Science Sector/Secteur des sciences

Fisheries and Oceans Canada/Pêches et Océans Canada

Tel: 613-991-6863 Cell: 613-240-7726

De: McPherson, Arran < Arran.McPherson@dfo-mpo.gc.ca>

Envoyé: 10 mai 2019 09:58

À: Nadeau, Simon (NCR) < Simon.Nadeau@dfo-mpo.gc.ca >; Vigneault, Bernard (EC) < bernard.vigneault@canada.ca >;

Burns, Adam < Adam.Burns@dfo-mpo.gc.ca>; Whorley, David < David.Whorley@dfo-mpo.gc.ca>

Cc: Robinson, Connor < Connor.Robinson@dfo-mpo.gc.ca >; McGill, Stephanie < Stephanie.McGill@dfo-mpo.gc.ca >;

Northcott, Jennifer < Jennifer.Northcott@dfo-mpo.gc.ca>

Objet: Seal Memo **Importance**: Haute

[Numéro de page]

Hi everyone, I am circulating a draft the Seals memo for your urgent review. I will need to advance this today – but it draws essentially from text previously approved so hopefully, should be quick. Many thanks, Arran.

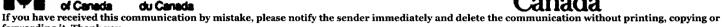
Arran McPherson, PhD

Assistant Deputy Minister, Ecosystems and Oceans Science Fisheries and Oceans Canada / Government of Canada arran.mcpherson@dfo-mpo.gc.ca / Tel: 613-990-0271

Sous-ministre adjointe Sciences des écosystèmes et des océans Pêches et Océans Canada / Gouvernement du Canada arran.mcpherson@dfo-mpo.qc.ca / Tél. : 613-990-0271



Gouvernement du Canada



forwarding it. Thank you.

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Pages 163 to / à 167
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Pages 168 to / à 173

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pages 150 to / à 155

Nadeau, Simon (NCR)

De: Envoyé: Vigneault, Bernard 17 mai 2019 08:38

À:

Béchard, Geneviève

Cc:

McGill, Stephanie; Nadeau, Simon (NCR)

Objet:

Seals way forward - May 17 2019 revisions ESD.docx Seals way forward - May 17 2019 revisions ESD.docx

Pièces jointes: Importance:

Haute

Catégories:

Important

Geneviève,

Here's another kick at the can for the revision to the seal memo. I had a chance to discuss this with Jean earlier today. We need to discuss as it seems we have received conflicting inputs regarding the key messages. I will go see Stephanie on this,

Bernard



Fisheries and Oceans Canada

Pêches et Océans Canada

Deputy Minister

Sous-ministre

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2019-009-00092 EKME #: 4018006

MEMORANDUM FOR THE MINISTER

ATLANTIC SEAL INITIATIVE - PROPOSED WAY FORWARD (FOR DECISION INFORMATION)

SUMMARY OF ADVICE TO MINISTER

The purpose of this note is to recommend a way forward for pinniped science, particularly the issue of seal predation impacts on key fish stocks on the East Coast.

s.19(1) s.21(1)(a) s.21(1)(b) On the East Coast, harp seal and grey seal populations are healthy and the subjects of commercial hunts and therefore have been the focus of Fisheries and Oceans Canada's (DFO) pinniped research over the last decades. Harvest of these seal species is significantly lower than established sustainable harvest levels, due to lack of market demand and access for seal products. While there is a consensus about the impact of grey seals on many groundfish species, and particularly in the Southern Gulf of St. Lawrence, the science basis available indicates that harp seals do not represent the mostan important factor limiting cod recovery. However, harvesters are often skeptical of the scientific findings with regards to impacts of seal predation on the species they are harvesting, and may not be aware of all the efforts DFO Science has dedicated to this issue.

DFO has had discussion about this over the last few weeks				
DFO committed to providing	a summary of our existing activities			
A draft of this material is included for your review (TAB 2).				



BACKGROUND

On the East Coast, harp seals and grey seals are currently the subject of commercial hunts and therefore have been the focus of DFO's pinniped research (e.g., pinniped diet, impacts on prey populations) over the last decades. What the office is a consensus about the impact of grey seals on many groundfish species and particularly in the Southern Gulf of St. Lawrence seals on the seals do not represent the most important factor limiting cod recovery.

In Atlantic Canada, commercial harvest of harp seals and grey seals are very limited and small relative to the threshold provided by science to inform sustainable harvest levels; of a possible sustainable harvest of 325,000 harp seal/year, the 2016 harvest amounted to 66,800 individuals.

The small commercial harvest relative to the allowable threshold is likely due to a number of factors, including challenges to domestic and international demand for seal products and international market access barriers or prohibitions. While some seal products appear to have growth potential (i.e. seal oil), significant challenges remain for other products such as seal pelts or meat. DFO's Certification and Market Access Program for Seals (CMAPS) is funding activities by commercial and indigenous applicants to address some of these market-related challenges (last planned funding year 2019-2020). The Atlantic Seal Advisory Committee (ASAC) Indigenous representatives are calling for increased efforts to expand and/or re-open international markets. As well, ASAC representatives and the broader fishing industry still have concerns about seal-related mortality in key commercial fish stocks driven by increasing numbers of seals, in particular grey seals, in the Atlantic.

For grey seal, approximately a decade has passed since DFO Science advice indicated that a 65 to 70 per cent reduction of the population <u>foraging in the Southern Gulf we</u>could be needed to potentially generate a positive impact on the cod population in the Southern Gulf of St. Lawrence. This advice prompted internal government of Canada discussions on possible management measures that could be taken. Numerous unsuccessful attempts were made to obtain approval for targeted removals of grey seals in the Southern Gulf of St. Lawrence. Further to these discussions, efforts focused on market opportunities as a commercial hunt incentive rather than directly reducing seal numbers through interventions.

Numerous fishing industry members have raised concerns about the potential impact of seals on their fisheries and have repeatedly voiced their interest I participating in seal population reduction

activities.
STRATEGIC CONSIDERATIONS
Departmental officials met with
The focus of these discussions was on the existing science programs on seals in Atlantic Canada. It was acknowledged that the continued DFO science efforts to better understand this issue are also not broadly known.
DFO officials agreed to provide this information
This material has been prepared and is attached for your approval (TAB 2).

ADVICE AND RECOMMENDATIONS TO MINISTER NEXT STEPS

s.19(1) s.21(1)(b)

	It is recommended that	approve	the distribution of
	the enclosed Science summary (TAB 2)		
s.19(1) s.21(1)(a) s.21(1)(b)			
3.21(1)(0)	Timothy Sargent	Kevin Stringer	
	Deputy Minister	Associate Deputy Minister	•
	I concur with the recommendations I do not concur with the recommendations		
	Jonathan Wilkinson Minister		
	Minister's Comments:		

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Fiche d'acheminement de correspondance Pêches et Océans Canada

> UNCLASSIFIED GCCMS #: 2019-009-00092 EKME #: 4018006

To: Pour:	Timothy Sargent	Date:
Object: Objet:	ATLANTIC SEAL INITIA	TIVE - PROPOSED WAY FORWARD
From / De:	Bernard Vigneault, DG Ed	osystem Science
Via:	Arran McPherson, ADM E	cosystems and Oceans Science
	al approvals: approbation(s):	
X	Material for the Minister Documents pour le Ministre	Your Signature Information
Remark	9	is developed in consultation with the following ur Management
Drafting Officer/ Rédacte		

Pages 180 to / à 186 are duplicates of sont des duplicatas des pages 113 to / à 119

Whorley, David

From:

Whorley, David

Sent:

Tuesday, May 21, 2019 11:12 AM

To:

D'Aoust, Courtney

Subject:

FW: Seals Science at DFO

s.19(1)

Attachments:

Atlantic Seals Science at Fisheries and Oceans Canada.pdf

s.21(1)(b)

From: Ruecker, Kirsten < Kirsten.Ruecker@dfo-mpo.gc.ca>

Sent: Tuesday, May 21, 2019 11:11 AM

To: Whorley, David <David.Whorley@dfo-mpo.gc.ca>; Lester, Brian <Brian.Lester@dfo-mpo.gc.ca>

Subject: FW: Seals Science at DFO

From: Patrick, Lindsey < Lindsey.Patrick@dfo-mpo.gc.ca >

Sent: May-21-19 11:10 AM

To: Burns, Adam < Adam.Burns@dfo-mpo.gc.ca >; Ruecker, Kirsten < Kirsten.Ruecker@dfo-mpo.gc.ca >

Cc: Waddell, Mark < Mark.Waddell@dfo-mpo.gc.ca >

Subject: FW: Seals Science at DFO

FYI – wanted to ensure you saw this

Lindsev

From: McPherson, Arran < Arran.McPherson@dfo-mpo.gc.ca>

Sent: Friday, May 17, 2019 5:43 PM

To:

Cc: Lapointe, Sylvie < Stringer, Kevin < Kevin <a href=

Subject: Seals Science at DFO

I committed to getting back to you with a short overview of the science work that Fisheries and Oceans has been undertaking on seals

This summary is enclosed.

Many thanks, Arran.

Arran McPherson, PhD

Assistant Deputy Minister, Ecosystems and Oceans Science Fisheries and Oceans Canada / Government of Canada arran.mcpherson@dfo-mpo.gc.ca / Tel: 613-990-0271

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Atlantic Seals Science at Fisheries and Oceans Canada

Harp seal

The estimate of total number of harp seals in the Northwest Atlantic by DFO is based on surveys of breeding colonies in winter every 5 years. The total population is estimated using a model that incorporates the number of pups estimated from the aerial surveys, differing reproductive rates and mortality rates for animals of different ages, and factoring in variation in these rates due to different ice conditions as well as harvest amounts. The most recent survey was completed in 2017 and results will be peer reviewed in fall 2019 to update the assessment of the population.

The last (2014) assessment estimated the population to have stabilized at 7.4M animals. Several methods are used to evaluate what seals are eating, which allows to us reduce the uncertainty associated with individual methods. Such methods include analysis of bones/hard parts in stomachs, visual and DNA-based examination of content of digestive tracts and feces, and stable isotopes (allows to see where in the food chain main prey come from). DFO continues to collect additional data on abundance and diets of harp seals in the areas of concern.

Determining the impact of harp seal predation on their prey requires a good understanding of the population dynamics of the prey itself, and in particular, what other factors may be regulating these populations of prey such as the abundance of capelin (a key prey for cod), the presence of other key cod predators, and the environmental conditions impacting cod populations. This information was reviewed in 2014 and was last considered in 2018. Most recently, at the Regional Peer-review of northern cod in March 2019, capelin was found to be an important driver of cod condition, mortality and abundance. DFO is planning a peer review in 2020-21 that would aim at updating the information available on the impacts of harp seal predation, including on capelin biomass, and cod abundance.

DFO scientists continue to study and monitor seals to better understand them and their role/impact in the ecosystems. In 2017 and 2018, harp seals off Newfoundland have been equipped with satellite transmitters which provide insights into timing, movements, and foraging behaviour by seals. Examples of the work currently underway include studying the impact of the changing environment on the body condition and reproduction of harp seals, and studying changes in seal diet, including through using DNA-based tools.

A new project starting in 2019-20 aims at determining the importance of harp seal predation on the dynamics of key forage and commercial species (capelin, herring, shrimp) in the Northern Gulf of St. Lawrence (4RS3Pn) and off Newfoundland (2J3KL) through the development of comparable ecosystem models. This project will allow to update seal consumption estimates, construct ecosystem models and better integrate seal consumption into future fish stock assessments.

Grey seal

The grey seal population in Atlantic Canada is surveyed in winter on breeding beaches every five years. The approach to determine the population size is similar to the approach described for

s.21(1)(b)

harp seal above. The most recent grey seal survey was completed in 2016 and the population was estimated at 424,300 animals, from an estimated 15,000 in 1960.

Grey seals diet is very diverse and includes fish, mostly close to the seafloor, taken at depths down to 70 m or more. Their average daily food requirement is estimated to be 5 kg, but animals don't feed during the breeding season.

In October 2010, DFO evaluated the impacts of grey seals on Fish Populations in Eastern Canada. As part of this science advisory process, a number of the potential causes of increased adult Atlantic cod mortality were examined. The conclusions reached were that predation by grey seals was the greatest contributor (50%) to increased mortality in large southern Gulf of St. Lawrence cod. The conclusions of the meeting also indicated that in the Southern Gulf of St. Lawrence, groundfish and skate mortality due to grey seal continue to increase. More recently, there has also been mounting evidence that high grey seal predation may force a redistribution of many groundfish species, into potentially less productive areas.

In 2010, DFO concluded that grey seals were not limiting cod recovery off the eastern Scotian shelf however, grey seals may be important in other areas. DFO has also worked on evaluating anti-reproduction vaccination to control populations.

Various research projects on grey seal are underway. For example, in 2017-18, grey seals in the Gulf of St. Lawrence have been equipped with satellite transmitters to better understand their distribution and feeding habits. The use of drones to census populations is also being tested as an alternative approach to surveying the population. Breeding and survival rates are also assessed annually.

Appendix - Atlantic seal papers published by DFO from 2012-2017

s.21(1)(b)

- Addison, R.F., Muir, D. C., Ikonomouc, M.G., Harwood, L. Smith, T. G., and Alikamik, J. 2014. Temporal trends in "legacy" organochlorine contaminants in blubber of ringed seals (Phoca hispida) from Ulukhaktok, NT, Canada between 1972 and 2010. Science of the Total Environment 466-467: 564-576. http://dx.doi.org/10.1016/j.scitotenv.2013.07.079.
- Andersen JM, Stenson GB, Skern-Maurizen M, Wiersma YF, Rosing-Asvid A, MO Hammill and L Boehme . 2014. Drift Diving by Hooded Seals (Cystophora cristata) in the Northwest Atlantic Ocean. PLoS ONE 9(7): e103072. doi:10.1371/journal.pone.0103072
- Andersen, J. M., Wiersma, Y. F., Stenson, G. B., Hammill, M. O., Rosing-Asvid, A., and Skern-Maurizen, M. 2013. Habitat selection by hooded seals (Cystophora cristata) in the Northwest Atlantic Ocean. ICES Journal of Marine Science, 70:173–185.
- Andersen, J.M, M. Skern-Mauritzen, L. Boehme, Y.F. Wiersma, A. Rosing-Asvid, M.O. Hammill and G.B. Stenson. 2013. Investigating Annual Diving Behaviour by Hooded Seals (Cystophora cristata) within the Northwest Atlantic Ocean. Plos One 8: Article number e80438. DOI 10.1371/journal.pone.0080438
- Bellehumeur, C., Nielsen, O., Measures, L., Harwood, L., Goldstein, T., Boyle, B., and Gagnon, C. 2015. Herpesviruses including novel gammaherpes viruses are widespread among phocid seal species in Canada. Journal of Wildlife Disease 52 (1): 70-81
- Bennett, K.A., M. Hammill, and S. Currie. 2013. Liver glucose-6-phosphatase proteins in suckling and weaned grey seal pups: structural similarities to other mammals and relationship to nutrition, insulin signalling and metabolite levels. Journal Of Comparative Physiology B-Biochemical Systemic And Environmental Physiology 183:1075-1088. Doi:10.1007/S00360-013-0768-X
- Bennett, KA, IS MacMillan, M Hammill, and S Currie. 2014. HSP70 abundance and antioxidant capacity in feeding and fasting gray seal pups: Suckling is associated with higher levels of key cellular defenses. Physiological and Biochemical Zoology 87(5):663–676.
- Boehme L, Thompson D, Fedak M, Bowen D, Hammill MO, et al. (2012) How Many Seals Were There? The Global Shelf Loss during the Last Glacial Maximum and Its Effect on the Size and Distribution of Grey Seal Populations. PLoS ONE 7(12): e53000. doi:10.1371/journal.pone.0053000
- Bousquet, E. Chassot, D.E. Duplisea, and Mike O. Hammill. 2014. Forecasting the Major Influences of Predation and Environment on Cod Recovery in the Northern Gulf of St. Lawrence. PLoS ONE 9(2): e82836. doi:10.1371/journal.pone.0082836
- Bowen, W. D. 2014. Whale and seal research at BIO through five decades. In VOYAGE OF DISCOVERY, Fifty Years of Marine Research at Canada's Bedford Institute of Oceanography: A commemorative volume in celebration of the 50th anniversary of the Bedford institute of Oceanography Dartmouth, Nova Sotia, Canada, 1962 2012. Ed. David N. Nettleship, D. E., Gordon, D. C., Lewis, M. C. F., and Latremouille, M. P. Pp. 93-102.
- Bowen, W. D., C. E. den Heyer, McMillan, JI, Iverson SJ. 2015. Offspring size at weaning affects survival to recruitment and reproductive performance of primiparous gray seals. Ecology and Evolution 5(7): 1412-1424

- Brown, TM, DCG Muir, SH Ferguson, BG Young, AT Fisk, KJ Reimer, X Wang. 2016.

 Mercury and cadmium in ringed seals in the Canadian Arctic: influence of location and diet.

 Science of the Total Environment 545–546: 503–511
- Buren, A. D., M. Koen-Alonso and G. B. Stenson. 2014. The role of harp seals, fisheries and food availability in drive the dynamics of northern cod. Mar. Ecol. Prog. Ser. In Press. Accepted June 2014.
- Buren, A.D., M. Koen-Alonso, P. Pepin, F. Mowbry, B. Nakashima, G. Stenson, N. Ollerhead, W.A. Montevecchi. 2014. Bottom-up regulation of capelin, a keystone forage species, PLoS One 9(2):e87589. Doi:10.1371/journal.pone.0087589.
- Carr, S.M., A.T. Duggan, G.B. Stenson and H.D. Marshall. 2015. Quantitative phylogenomics of within-species mitogenome variation: Monte Carlo and non-parametric analysis of phylogeographic structure among discrete transatlantic breeding areas of harp seals (Pagophilus groenlandicus). PLoS ONE 10(8): e0134207. doi:10.137/journal.pone.0134207
- Daoust, P.-Y., C. Caraguel, H. Fenton, M. O. Hammill, L. D. Roy, and J. Spears. 2012. Assessment of current and alternative methods for killing young grey seals (Halichoerus grypus) during commercial harvest. DFO Can. Sci. Advis. Sec. Res. Doc. 2012/xxx. iv + xx p. Available at http://www.dfo-mpo.gc.ca/csas.
- Daoust, P.-Y., M. Hammill, G. Stenson and C. Caraguel. 2014. A review of animal welfare implications of the Canadian commercial seal hunt: a critique. Marine Policy. 43:367-371.
- den Heyer, C. E., and W. D. Bowen. 2017. Estimating changes in vital rates of Sable Island grey seals using mark-recapture analysis. DFO Can. Sci. Advis. Sec. Res. Doc. 2017/054. v + 27 p.
- den Heyer, C., W.D. Bowen, and J.I. McMillan. 2013. Long-term changes in grey seal vital rates at Sable Island estimated from POPAN mark-resighting analysis of branded seals. Can. Sci. Advis. Sec. Res. Doc., 2013/21.
- den Heyer, C.E., S.L.C. Lang, W.D. Bowen, and M.O. Hammill. 2017. Pup production at Scotian Shelf grey seal (Halichoerus grypus) colonies in 2016. DFO Can. Sci. Advis. Sec. Res. Doc. 2017/056. v + 35 p.
- Edwards, A.M., Haigh, R., Tallman, R., Swain, D.P., Carruthers, T.R., Cleary, J.S., Stenson, G. and Doniol-Valcroze, T. 2017. Proceedings of the Technical Expertise in Stock Assessment (TESA) National Workshop on 'Incorporating an ecosystem approach into single-species stock assessments' 21-25 November 2016, Nanaimo, British Columbia. Can. Tech. Rep. Fish. Aquat. Sci. 3213: vi + 53 p.
- Frie, A. K., G. Stenson and T. Haug. 2012. Long term trends in reproductive and demographic parameters of female Northwest Atlantic hooded seals (Cystophora cristata (Erxleben, 1777): Population responses to ecosystem change? Can. J. Zool. 90:376-392.
- Frie, A. K., Hammill, M. O., Hauksson, E., Lind, Y., Lockyer, C., Stenman, O., and Svetocheva, O. 2013. Error patterns in age estimation and tooth readability assignment of grey seals (Halichoerus grypus): results from a transatlantic, image-based, blind-reading study using known-age animals. ICES Journal of Marine Science, 70:418-430. doi:10.1093/icesjms/fss169
- Frouin, H., Lebeuf, M., Hammill, M.O., Fournier, M. 2012. Transfer of PBDEs and chlorinated POPs from mother to pup during lactation in harp seals Phoca groenlandica. Science of the Total Environment 417–418 (2012) 98–107

- Hammill M.O., J. Dale, G.B. Stenson, C.E. den Heyer, J-F Gosselin, and D. Johnston. 2016. Comparison of methods to estimate grey seal pup production at different colonies DFO Can. Sci. Advis. Sec. Res Doc. 2017/041. iv + 19 p.
- Hammill, M. O and Stenson, G. B. 2014. Changes in ice conditions and potential impact on harp seal pupping. DFO Can. Sci. Advis. Sec. Res. Doc. 2014/025. iv + 14 p.
- Hammill, M. O. and Stenson, G. B. 2014. Assessing Harp Seals and Providing Advice in a Multiyear Framework. DFO Can. Sci. Advis. Sec. Res. Doc. 2014/038. iv + 22 p.
- Hammill, M. O., den Heyer, C.E. and Bowen, W.D. 2014. Grey Seal Population Trends in Canadian Waters, 1960-2014. DFO Can. Sci. Advis. Sec. Res. Doc. 2014/037. iv + 44 p.
- Hammill, M. O., G. B. Stenson, A. Mosnier and T. Doniol-Valcroze. 2014. Abundance estimates of Northwest Atlantic harp seals and management advice for 2014. DFO Can. Sci. Advis. Sec. Res. Doc. 2014/022.
- Hammill, M.O. and G.B. Stenson. 2013. A Discussion of the Precautionary Approach and its Application to Atlantic Seals. DFO Can. Sci. Advis. Sec.Res. Doc. 2013/030. v + 25 p.
- Hammill, M.O., and C. Sauvé. 2017. Growth and condition in harp seals-evidence of density dependent and density independent influences. ICES J. of Marine Science 74:1395-1407
- Hammill, M.O., C. den Heyer, and W.D. Bowen. 2014. Northwest Atlantic grey seal population trends, 1960-2013. DFO Can. Sci. Advis. Sec. Res. Doc.
- Hammill, M.O., G.B. Stenson, D.P. Swain and H.P. Benoît. 2014. Feeding by grey seals on endangered stocks of Atlantic cod and white hake. ICES J. Mar. Sci. doi:10.1093/icesjms/fsu123
- Hammill, M.O., G.B. Stenson, T. Doniol-Valcroze and A. Mosnier. 2012. Estimating carrying capacity and population trends of Northwest Atlantic harp seals, 1952-2012. Canadian Science Advisory Secretariat Res. Doc. 2012/148. iii + 31 p.
- Hammill, M.O., G.B. Stenson, T. Doniol-Valcroze and A. Mosnier. 2015. Conservation of Northwest Atlantic harp seals: past success, future uncertainty? Biological Conservation. 192:181-191
- Hammill, M.O., J-F. Gosselin and G.B. Stenson. 2017. Pup production of Northwest Atlantic grey seals in the Gulf of St. Lawrence. DFO Can. Sci. Advis. Sec. Res. Doc. 2017/043. iv + 14 p.
- Hammill, M.O., Stenson, G.B. and Mosnier, A. 2016. Science Advice on Theoretical Harvest Reduction Scenarios and Sustainable Catches of NWA harp seals? DFO Can. Sci. Advis. Sec. Res. Doc. 2016/055. v + 32 p.
- Hammill, M.O.,den Heyer, C.E., and Bowen, W.D. 2016. Grey Seal Population Trends in Canadian Waters, 1960-2016 and Harvest Advice. DFO Can. Sci. Advis. Sec. Res. Doc. 2017/052. vi + 30 p.
- Harvey, V., M.O. Hammill, D.P. Swain, G.A. Breed, C. Lydersen and K.M. Kovacs. 2012. Winter foraging by a top predator, the grey seal, in relation to the distribution of prey. Marine Ecology Progress Series 462: 273-286.
- Heaslip, S.G., W.D. Bowen, and S.J. Iverson. 2014. Testing predictions of optimal diving theory using animal-borne video from harbour seals (Phoca vitulina). Canadian Journal of Zoology 92:309-318.
- Lidgard, D. C., W. D. Bowen, D. J. Boness. 2012. Longitudinal changes in male physical traits and the implications for mating behaviour and success in a long-lived polygynous mammal, the grey seal. Can. J. Zool. 90:849-860.

- Øigård,T.-A., A.K. Frie, K., T. Nilssen and M.O. Hammill. 2012. Modelling the abundance of grey seals (Halichoerus grypus) along the Norwegian coast. ICES J. of Mar. Sci. 69:1436-1447. doi 10.1093/icesjms/fss103
- Pearson, L.E., H.E.M. Liwang, M.O. Hammill, J.M. Burns. 2014. Shifts in thermoregulatory strategy during ontogeny in harp seals (Pagophilus groenlandicus). J. of Thermal Biology 44:93-102. DOI: 10.1016/i.itherbio.2014.02.001
- Perry, E., G.B. Stenson & A.D. Buren. 2016. Attendance and nursing patterns of harp seals in the harsh environment of the northwest Atlantic. Polar Biology. DOI: 10.1007/s00300-016-1938-6
- Puryear, Wendy B., M. Keogh, N. Hill, J. Moxley, E. Josephson, K.R. Davis, C. Bandoro, D. Lidgard, A. Bogomolni, M. Levin, Lang S., Hammill, M., Bowen, W.D., Johnston, D.W., Romano, T., Waring, G., and Runstadler. 2016. Prevalence of influenza A virus in live-captured North Atlantic gray seals: a possible wild reservoir. Emerging Microbes and Infections 5. e81; doi:10.1038/emi.2016.77
- Sauvé, C, J. Van de Walle, M.O. Hammill, J.P.Y. Arnould, G. Beauplet. 2014. Stomach Temperature Records Reveal Nursing Behaviour and Transition to Solid Food Consumption in an Unweaned Mammal, the Harbour Seal Pup (Phoca vitulina). PLoS ONE 9(2): e90329. doi:10.1371/journal.pone.0090329
- Sauvé, CC, G Beauplet, MO Hammill, and I Charrier. 2015. Acoustic analysis of airborne, underwater, and amphibious mother attraction calls by wild harbor seal pups (Phoca vitulina). J. of Mammalogy DOI:10.1093/jmammal/gyv064
- Sauvé, CC, G Beauplet, MO Hammill, and I Charrier. 2015. Mother-pup vocal recognition in harbour seals: influence of maternal behaviour, pup voice and habitat sound properties. Animal Behaviour 105:109-120
- Stenson, G. B., D. Wakeham, A. Buren and M. Koen-Alonso. 2014. Density-dependent and density-independent factors influencing reproductive rates in Northwest Atlantic harp seals, Pagophilus groenlandicus. DFO Can. Sci. Advis. Sec. Res. Doc. 2014/058.
- Stenson, G.B. 2012 Report of the Joint NAFO/ICES Working group on Harp and Hooded Seals (WGHARP). NAFO SCS Doc 12/17.
- Stenson, G.B. 2012. Estimating consumption of prey by harp seals, Pagophilus groenlandicus, in NAFO divisions 2J3KL. Canadian Science Advisory Secretariat Res. Doc. 2012/156.
- Stenson, G.B. 2014. The Status of harp and hooded seals in the North Atlantic. NAFO SCR Doc 14/026. N6321.
- Stenson, G.B. 2014. Updated Estimates of Harp Seal Removals in the Northwest Atlantic. DFO Can. Sci. Advis. Sec. Res. Doc. 2014/015. v + 35 p.
- Stenson, G.B. and M.O. Hammill. 2012. Living on the edge: Observations of Northwest Atlantic harp seals in 2010 and 2011. Can. Sci. Advis. Sec. Res. Doc. 2011/108. Jy + 12 p.
- Stenson, G.B. and M.O. Hammill. 2014. Can ice breeding seals adapt to habitat loss in a time of climate change? ICES J. Mar. Sci. doi:10.1093/icesjms/fsu074. Online May 2014.
- Stenson, G.B., A.D. Buren and M. Koen-Alonso. 2016. The impact of changing climate and abundance on reproduction in an ice-dependent species, the Northwest Atlantic harp seal, Pagophilus groenlandicus. ICES. Journal of Marine Science 73:250-262
- Stenson, G.B., M.O. Hammill, J.W. Lawson and J-F. Gosselin. 2014. Estimating pup production of Northwest Atlantic harp seals, Pagophilus groenlandicus, in 2012. DFO Can. Sci. Advis. Sec. Res. Doc. 2014/057.

- Sutherland, D.A., F. Straneo, G. B. Stenson, F. J.M. Davidson, M.O. Hammill, and A. Rosing-Asvid. 2013 Atlantic water variability on the SE Greenland continental shelf and its relationship to SST and bathymetry. J. Geophysical Research: Oceans, 118, 1–9, doi:10.1029/2012JC008354.
- Swain, D.P., H.P. Benoit, and M.O. Hammill. 2015. Spatial distribution of fishes in a Northwest Atlantic ecosystem in relation to risk of predation by a marine mammal. J. Animal Ecol. 84, 1286–1298
- Tucker, S. G. Stenson, W.D. Bowen and S. Iverson. 2013. Fueling phocids: divergent exploitation of primary energy sources and parallel ontogenetic diet switches among three species of sub-arctic seals. Mar. Mammal. Sci. 29(4): E428–E447.
- Ure, D.L., W.D. Bowen, and C.E. den Heyer. 2016. Grey seal population status and trends, Sable Island National Park Reserve, in State of Park Assessment Technical Report
- Weitzman. J., C. den Heyer, and W. D. Bowen 2017. Factors influencing and consequences of breeding dispersal and habitat choice in female grey seals (Halichoerus grypus) on Sable Island, Nova Scotia. Oecologia 183: 367-378, doi:10.1007/s00442-016-3764-5

Whorley, David

From:

D'Aoust, Courtney

Sent:

Tuesday, May 21, 2019 11:13 AM

To:

Whorley, David

Subject:

RE: Seals Science at DFO

s.19(1)

Thanks David

s.21(1)(b)

From: Whorley, David <David.Whorley@dfo-mpo.gc.ca>

Sent: Tuesday, May 21, 2019 11:12 AM

To: D'Aoust, Courtney < Courtney. D'aoust@dfo-mpo.gc.ca>

Subject: FW: Seals Science at DFO

From: Ruecker, Kirsten < Kirsten.Ruecker@dfo-mpo.gc.ca>

Sent: Tuesday, May 21, 2019 11:11 AM

To: Whorley, David < David. Whorley@dfo-mpo.gc.ca >; Lester, Brian < Brian. Lester@dfo-mpo.gc.ca >

Subject: FW: Seals Science at DFO

From: Patrick, Lindsey < Lindsey.Patrick@dfo-mpo.gc.ca>

Sent: May-21-19 11:10 AM

To: Burns, Adam < Adam.Burns@dfo-mpo.gc.ca >; Ruecker, Kirsten < Kirsten.Ruecker@dfo-mpo.gc.ca >

Cc: Waddell, Mark < Mark. Waddell@dfo-mpo.gc.ca>

Subject: FW: Seals Science at DFO

FYI - wanted to ensure you saw this

Lindsey

From: McPherson, Arran < Arran.McPherson@dfo-mpo.gc.ca>

Sent: Friday, May 17, 2019 5:43 PM

To:

Cc: Lapointe, Sylvie < Sylvie.Lapointe@dfo-mpo.gc.ca >; Stringer, Kevin < Kevin.Stringer@dfo-mpo.gc.ca >;

Subject: Seals Science at DFO

I committed to getting back to you with a short overview of the science work that Fisheries and Oceans has been undertaking on seals

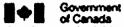
This summary is enclosed.

Many thanks, Arran.

Arran McPherson, PhD

Assistant Deputy Minister, Ecosystems and Oceans Science Fisheries and Oceans Canada / Government of Canada arran.mcpherson@dfo-mpo.gc.ca / Tel: 613-990-0271

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Greer, Stephanie

From:

Lester, Brian

Sent:

Wednesday, June 5, 2019 12:45 PM

To:

Burns, Adam; Ruecker, Kirsten

Subject: Re: Seals v

Re: Seals way forward - June 5.docx

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Yes I attended. Note is to generally talk about

I will look at the note.

The focus of meeting was science.

Was going to debrief David when he returned but can provide you more if you wish.

Sent from my BlackBerry 10 smartphone on the Bell network.

From: Burns, Adam

Sent: Wednesday, June 5, 2019 12:25 PM

To: Ruecker, Kirsten; Lester, Brian

Subject: Fwd: Seals way forward - June 5.docx

Views? Was anyone at this meeting?

Begin forwarded message:

From: "Lapointe, Sylvie" < Sylvie.Lapointe@dfo-mpo.gc.ca>

Date: June 5, 2019 at 11:59:59 AM EDT

To: "Burns, Adam" < Adam.Burns@dfo-mpo.gc.ca > Subject: FW: Seals way forward - June 5.docx

Fyi

Sylvie

From: McPherson, Arran < Arran. McPherson@dfo-mpo.gc.ca>

Sent: Wednesday, June 5, 2019 11:40 AM

To: Forgeron, Jean-Guy < Jean-Guy.Forgeron@dfo-mpo.gc.ca >; Lapointe, Sylvie < Sylvie.Lapointe@dfo-

mpo.gc.ca>; Robinson, Connor < Connor.Robinson@dfo-mpo.gc.ca>; Jarjour, Jasmine

<<u>Jasmine.Jarjour@dfo-mpo.gc.ca</u>>

Cc: McGill, Stephanie < Stephanie. McGill@dfo-mpo.gc.ca >

Subject: Seals way forward - June 5.docx

Hi everyone, further to the discussion with Tim yesterday, I have made some revisions to the seals note. Could you pls take a look and add/subtract anything you feel necessary? I would like to get this back to him tomorrow if possible. Thanks, Arran.
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EKME #: 4059928

To: Pour:	Timothy Sargent	Date:	JUN 0 6 2019	
Object: Objet:	ATLANTIC SEAL INITIATIV	/E - PROPOSED \	WAY FORWARD	
From / De:	Bernard Vigneault, DG Ecos	system Science	4	
Via:	Arran McPherson, ADM Eco	systems and Ocea	ans Science	- JUN 0 6 2019
	nal approvals:) approbation(s):		- 2X	
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Deputy Minister

Sous-ministre

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2019-009-00092 EKME #: 4059928

MEMORANDUM FOR THE MINISTER

ATLANTIC SEAL INITIATIVE - PROPOSED WAY FORWARD (FOR INFORMATION)

SUMMARY OF ADVICE TO MINISTER

The purpose of this note is to describe the way forward for pinniped science, particularly the issue of seal predation impacts on key fish stocks on the East Coast.

On the East Coast, harp seal and grey seal populations are healthy and the subjects of commercial hunts, and therefore have been the focus of Fisheries and Oceans Canada's (DFO) pinniped research over the last decades. While there is a consensus about the impact of grey seals on many groundfish species, and particularly in the Southern Gulf of St. Lawrence, the science basis available indicates that harp seals are not a major factor limiting cod recovery.

Harvest of these seal species is significantly lower than established sustainable harvest levels, due to lack of market demand and access for seal products. Further, the key challenge associated with seal management is removals at the level necessary to impact on fish populations.

Department has engaged with DFO provided activities	a summary (TAB 2) of our existing
While these activities would conot address the fundamental barriers to mopopulations.	contribute to the science understanding, they will be actively managing or reducing the seal

Canadä

BACKGROUND

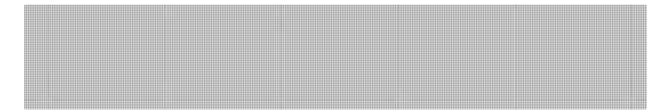
s.19(1) s.21(1)(b)

On the East Coast, harp seals and grey seals are currently the subject of commercial hunts and therefore have been the focus of DFO's pinniped research (e.g., pinniped diet, impacts on prey populations) over the last decades. There is a consensus about the negative impact of grey seals on many groundfish species and particularly in the Southern Gulf of St. Lawrence. However, the science basis available indicate that harp seals are not the most important factor limiting cod recovery.

In Atlantic Canada, commercial harvest of harp seals and grey seals are very limited and small relative to the threshold provided by science to inform sustainable harvest levels; of a possible sustainable harvest of 325,000 harp seal/year, the harvests over the past 4 years have averaged less than 60,000 animals annually. For grey seals, the sustainable harvest could be 34,500/year and on average, only approximately 1,100 have been harvested annually over the same period.

The small commercial harvest relative to the allowable threshold is likely due to a number of factors, including challenges to domestic and international demand for seal products and international market access barriers or prohibitions. While some seal products appear to have growth potential (i.e. seal oil), significant challenges remain for other products such as seal pelts or meat. DFO's Certification and Market Access Program for Seals (CMAPS) is funding activities by commercial and indigenous applicants to address some of these market-related challenges (last planned funding year 2019-20). The Atlantic Seal Advisory Committee (ASAC) Indigenous representatives are calling for increased efforts to expand and/or re-open international markets. As well, ASAC representatives and the broader fishing industry still have concerns about seal-related mortality in key commercial fish stocks driven by increasing numbers of seals, in particular grey seals, in the Atlantic.

For grey seals, approximately a decade has passed since DFO Science advice indicated that a 65 to 70 per cent reduction of the population foraging in the Southern Gulf could potentially generate a positive impact on the cod population in the Southern Gulf of St. Lawrence. This advice prompted internal government of Canada discussions on possible management measures that could be taken. Numerous unsuccessful attempts were made to obtain approval for targeted removals of grey seals. Further to these discussions, efforts focused on market opportunities as a commercial hunt incentive rather than directly reducing seal numbers through interventions.



.../3

STRATEGIC CONSIDERATIONS

s.19(1)

s.21(1)(b)

DFO maintains on-going research activities on the impacts of seal on the ecosystems such as tagging and studies on seal diet. Notably, an update of the harp seal population assessment is planned for October 2019. This work will support a comprehensive review of the potential impacts of harp seals on the ecosystem planned for 2020-21. While it is difficult to establish a direct link between seal predation and key fish stocks, this work will allow the department to update the science basis available to support future management decisions on seals.

However, while more science will contribute to further understanding the impacts of seals on fish populations, it will not contribute address the on-going and persistent challenge of how to incent additional removals.

Departmental officials met with	
	The focus of these discussions was on the existing anada. It was acknowledged that the continued DFO issue are also not broadly well understood.

.../4

NEXT STEPS

The Department will also continue its Atlantic seals science program of work and clearly communicate the outcomes of the science finding such that harvesters and others understand the impacts of these species on the fisheries resources.

s.19(1) s.21(1)(b)

Timothy Sargent		Kevin Stringer
Deputy Minister	•	Associate Deputy Minister

Attachments (2):

Tab 1:

Tab 2: Atlantic Seals Science at Fisheries and Oceans Canada (EKME #: 4059926)

Page 205
is a duplicate of
est un duplicata de la
page 103

Pages 206 to / à 212 are duplicates of sont des duplicatas des pages 189 to / à 195

Document Release. Information Act de la Loi sur '

Nadeau, Simon (NCR)

De:

McPherson, Arran 17 juin 2019 17:40

Envoyé: À:

Vigneault, Bernard

Cc:

McGill, Stephanie; Nadeau, Simon (NCR)

Objet:

Atlantic Seal Science Task Force. TOR working draft 2019 06 17 am.docx

Pièces jointes:

Atlantic Seal Science Task Force. TOR working draft 2019 06 17 am.docx

Catégories:

Important

Hi Bernard, this is great. I have gone through and changed a few things though, including the name of the group. At this point, I think you should share with Comms and get them started on something. However, we'll need to send up a quick memo to the Min with a strategy. E.g. announce the formation of the group,

Arran.

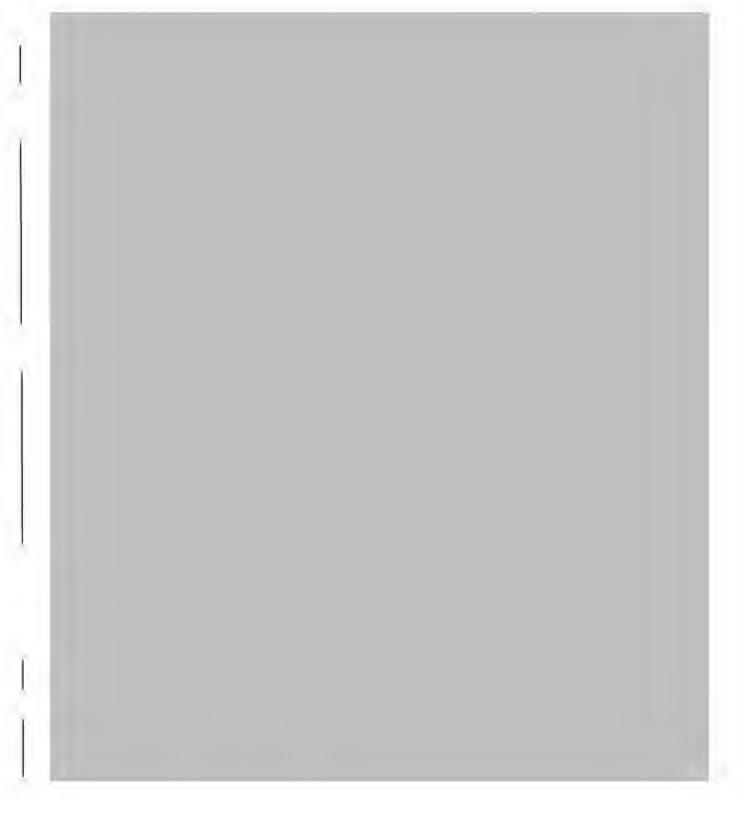
s.21(1)(b)

s.21(1)(a) s.21(1)(b)

Atlantic Seal Science Task <u>Team Force</u>

Terms of Reference

June 2019



Page 215 is withheld pursuant to sections est retenue en vertu des articles

21(1)(b), 21(1)(a)

of the Access to Information Act de la Loi sur l'accès à l'information

Whorley, David

From:

Norton, Brett

Sent:

Tuesday, June 18, 2019 10:15 AM

To:

Lester, Brian

Cc:

Burns, Adam; Whorley, David; D'Aoust, Courtney

Subject:

FW: Atl. Seal Task Team

Attachments:

Atlantic Seal Science Task Team draft TOR 2019 06 18.docx

Importance:

High

Looping in Brian.

From: Vigneault, Bernard <Bernard.Vigneault@dfo-mpo.gc.ca>

Sent: Tuesday, June 18, 2019 10:11 AM

To: Burns, Adam <Adam.Burns@dfo-mpo.gc.ca>

Cc: Nadeau, Simon (NCR) <Simon.Nadeau@dfo-mpo.gc.ca>; Whorley, David <David.Whorley@dfo-mpo.gc.ca>; Norton,

Brett <Brett.Norton@dfo-mpo.gc.ca>

Subject: Atl. Seal Task Team

Importance: High

Adam,

Just a heads up that we are preparing today a package for the DM regarding the Atlantic Seal Task Team that was discussed last week with MinO. We would like to send to DMO a summary box memo co-signed by Sylvie and Arran if possible today. We would include the draft ToR (see attached document), a draft minister level communication approach and a list of potential participants. In the absence of David, we will reach out to Brett regarding the suggested participants in particular. Thanks for your help with this and more to come this afternoon,

Bernard

Bernard Vigneault, Ph.D.

Director General, Ecosystem Science, Ecosystems and Oceans Science, Fisheries and Oceans Canada / Government of Canada

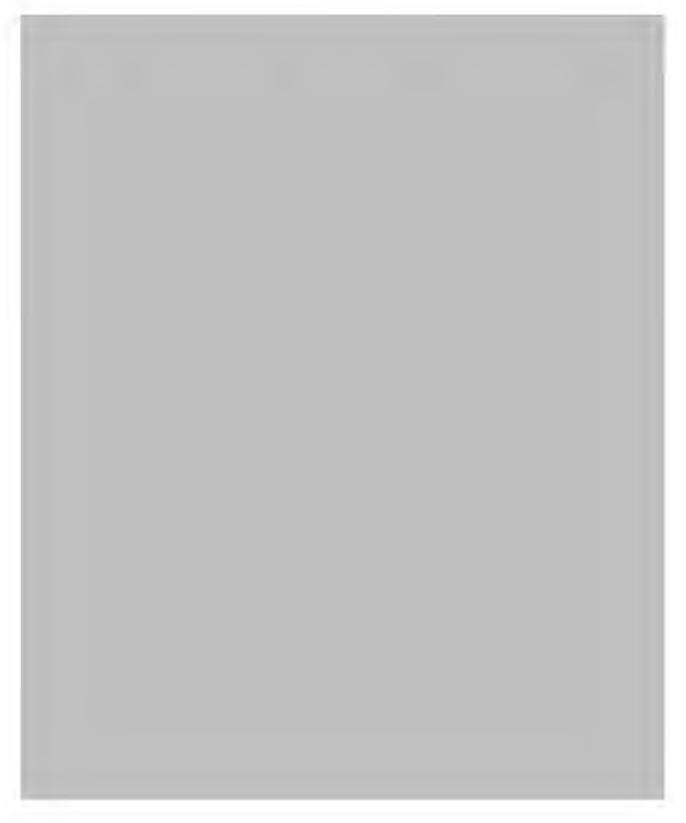
Directeur général, sciences des écosystèmes, sciences des écosystèmes et des océans, pêches et océans Canada / Gouvernement du Canada

s.21(1)(a) s.21(1)(b)

Atlantic Seal Science Task Team

Terms of Reference

June 2019



Page 218 is withheld pursuant to sections est retenue en vertu des articles

21(1)(b), 21(1)(a)

Whorley, David

From:

Patrick, Lindsey

Sent:

Tuesday, June 18, 2019 10:54 AM

To:

Burns, Adam

Cc:

Nadeau, Simon (NCR); Whorley, David; Norton, Brett; Ruecker, Kirsten; Day, Robert;

lacovitti, Michelle

Subject:

RE: Atl. Seal Task Team

FYI I asked their ADMO to send to us electronically for your and Sylvie's approval.

From: Burns, Adam <Adam.Burns@dfo-mpo.gc.ca>

Sent: Tuesday, June 18, 2019 10:15 AM

To: Vigneault, Bernard <Bernard.Vigneault@dfo-mpo.gc.ca>

Cc: Nadeau, Simon (NCR) <Simon.Nadeau@dfo-mpo.gc.ca>; Whorley, David <David.Whorley@dfo-mpo.gc.ca>; Norton,

Brett <Brett.Norton@dfo-mpo.gc.ca>; Ruecker, Kirsten <Kirsten.Ruecker@dfo-mpo.gc.ca>; Patrick, Lindsey

<Lindsey.Patrick@dfo-mpo.gc.ca>; Day, Robert <Robert.Day@dfo-mpo.gc.ca>

Subject: RE: Atl. Seal Task Team

Just FYI that Sylvie and I are both at FMOC today/tomorrow so our turnaround time won't be as quick as usual, and if approval needed today will need to be by email.

Brett Norton is acting Director today and Robert Day is acting DG. They should be engaged to ensure it can move quickly though Sylvie and I.

Cheers,

AΒ

From: Vigneault, Bernard < Bernard. Vigneault@dfo-mpo.gc.ca>

Sent: June 18, 2019 10:11 AM

To: Burns, Adam < Adam.Burns@dfo-mpo.gc.ca>

Cc: Nadeau, Simon (NCR) <Simon.Nadeau@dfo-mpo.gc.ca>; Whorley, David <David.Whorley@dfo-mpo.gc.ca>; Norton,

Brett <Brett.Norton@dfo-mpo.gc.ca>

Subject: Atl. Seal Task Team

Importance: High

Adam,

Just a heads up that we are preparing today a package for the DM regarding the Atlantic Seal Task Team that was discussed last week with MinO. We would like to send to DMO a summary box memo co-signed by Sylvie and Arran if possible today. We would include the draft ToR (see attached document), a draft minister level communication approach and a list of potential participants. In the absence of David, we will reach out to Brett regarding the suggested participants in particular. Thanks for your help with this and more to come this afternoon,

Bernard

Bernard Vigneault, Ph.D.

		-
Director General, Ecosystem Science, Ecosystems and Oceans Science, Fisheries Canada	and Oceans Canada / Government of	
Directeur général, sciences des écosystèmes, sciences des écosystèmes et des o Gouvernement du Canada	océans, pêches et océans Canada /	
No information has been removed or severed	d from this page	

Whorley, David

From:

Ruecker, Kirsten

Sent:

Tuesday, June 18, 2019 3:16 PM

To:

Lester, Brian; Norton, Brett; D'Aoust, Courtney; Burns, Adam; Whorley, David

Subject:

FW: Atl. Seal Task Team

Attachments:

Atlantic Seal Science Task Team draft TOR 2019 06 18_FRM edits.docx

fyi

From: Vigneault, Bernard <Bernard.Vigneault@dfo-mpo.gc.ca>

Sent: June-18-19 3:09 PM

s.21(1)(b)

To: Ruecker, Kirsten < Kirsten. Ruecker@dfo-mpo.gc.ca>

Subject: RE: Atl. Seal Task Team

Kirsten,

Thank you for your inputs. Full package to follow later today,

Bernard

Bernard Vigneault, Ph.D.

Director General, Ecosystem Science, Ecosystems and Oceans Science, Fisheries and Oceans Canada / Government of

Canada

Directeur général, sciences des écosystèmes, sciences des écosystèmes et des océans, pêches et océans Canada /

Gouvernement du Canada

From: Ruecker, Kirsten < Kirsten.Ruecker@dfo-mpo.gc.ca >

Sent: June 18, 2019 12:20 PM

To: Vigneault, Bernard < Bernard. Vigneault@dfo-mpo.gc.ca>

Cc: Burns, Adam < Adam.Burns@dfo-mpo.gc.ca >

Subject: RE: Atl. Seal Task Team

Hi Bernard,

Thank you for the draft TORs. The document looks very good. We have some minor copyedits in the attached. Some additional questions are in comments for your consideration as you deem appropriate.

Hope helpful,

Kirsten

From: Vigneault, Bernard < Bernard. Vigneault@dfo-mpo.gc.ca >

Sent: June-18-19 10:12 AM

To: Ruecker, Kirsten < Kirsten. Ruecker@dfo-mpo.gc.ca>

Subject: FW: Atl. Seal Task Team

Importance: High

Kirsten,

Thanks in advance for your help regarding the summary box memo on the Atlantic Seal Task Team (see details below),

Bernard

Bernard Vigneault, Ph.D.

Director General, Ecosystem Science, Ecosystems and Oceans Science, Fisheries and Oceans Canada / Government of Canada

Directeur général, sciences des écosystèmes, sciences des écosystèmes et des océans, pêches et océans Canada / Gouvernement du Canada

From: Vigneault, Bernard Sent: June 18, 2019 10:11 AM

To: Burns, Adam < Adam.Burns@dfo-mpo.gc.ca>

Cc: Nadeau, Simon (NCR) <Simon.Nadeau@dfo-mpo.gc.ca>; Whorley, David <David.Whorley@dfo-mpo.gc.ca>; Norton,

Brett <Brett.Norton@dfo-mpo.gc.ca>

Subject: Atl. Seal Task Team

Importance: High

Adam,

Just a heads up that we are preparing today a package for the DM regarding the Atlantic Seal Task Team that was discussed last week with MinO. We would like to send to DMO a summary box memo co-signed by Sylvie and Arran if possible today. We would include the draft ToR (see attached document), a draft minister level communication approach and a list of potential participants. In the absence of David, we will reach out to Brett regarding the suggested participants in particular. Thanks for your help with this and more to come this afternoon,

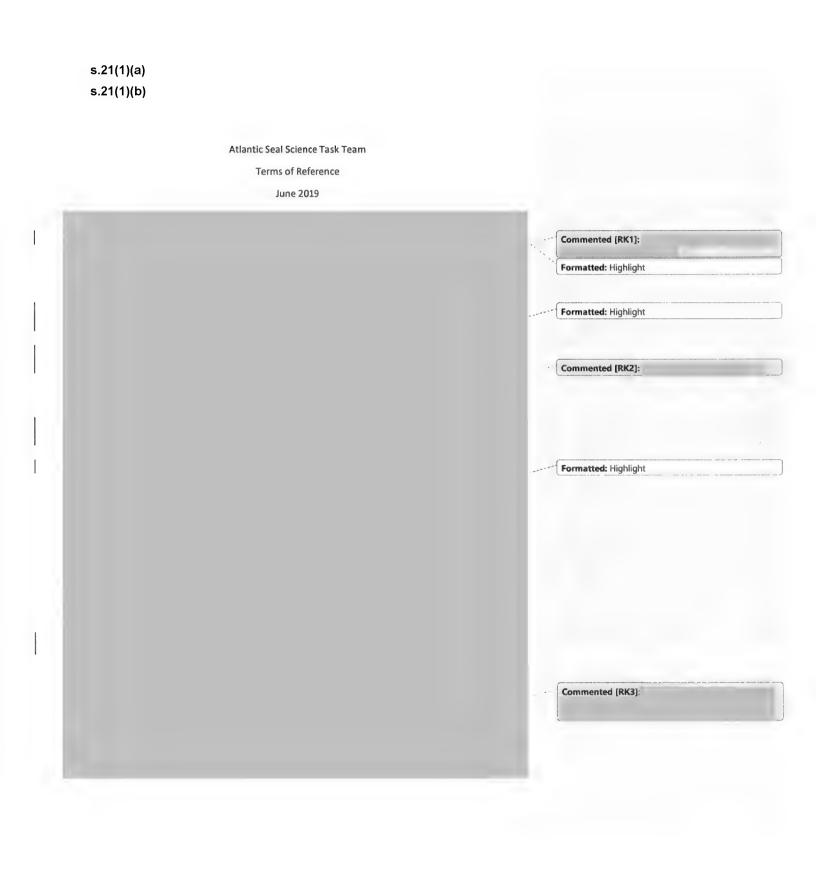
Bernard

Bernard Vigneault, Ph.D.

Director General, Ecosystem Science, Ecosystems and Oceans Science, Fisheries and Oceans Canada / Government of Canada

Directeur général, sciences des écosystèmes, sciences des écosystèmes et des océans, pêches et océans Canada / Gouvernement du Canada

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Page 224 is withheld pursuant to sections est retenue en vertu des articles

21(1)(b), 21(1)(a)

Whorley, David

From:

Ruecker, Kirsten

Sent:

Wednesday, June 19, 2019 10:15 AM

To:

Whorley, David; Lester, Brian; Norton, Brett; D'Aoust, Courtney

Subject:

FW: Head's up Atlantic Seal Task Team memo

Attachments:

Tab 1 - Draft ToR Atlantic Seal Science Task Team.docx; Tab 2 - Potential Task Team

Members.DOCX; Memo to Min - Atlantic Seal Science Task Team.DOCX

Importance:

High

For info. Sylvie approved last night.

From: Patrick, Lindsey <Lindsey.Patrick@dfo-mpo.gc.ca>

Sent: June-18-19 5:34 PM

To: Lapointe, Sylvie <Sylvie.Lapointe@dfo-mpo.gc.ca>; Burns, Adam <Adam.Burns@dfo-mpo.gc.ca>

Cc: lacovitti, Michelle <Michelle.lacovitti@dfo-mpo.gc.ca>; Ruecker, Kirsten <Kirsten.Ruecker@dfo-mpo.gc.ca>; Raniere,

Benoit Robert <BenoitRobert.Raniere@dfo-mpo.gc.ca> Subject: FW: Head's up Atlantic Seal Task Team memo

Importance: High

Hi for your review and approval

Hope day one went well

Thanks Lindsey

From: McGill, Stephanie < Stephanie.McGill@dfo-mpo.gc.ca >

Sent: Tuesday, June 18, 2019 5:29 PM

To: Patrick, Lindsey < Lindsey. Patrick@dfo-mpo.gc.ca>

Cc: Young, Susan < Susan. Young@dfo-mpo.gc.ca>; lacovitti, Michelle < Michelle.lacovitti@dfo-mpo.gc.ca>; Raniere,

Benoit Robert < BenoitRobert.Raniere@dfo-mpo.gc.ca> Subject: RE: Head's up Atlantic Seal Task Team memo

Importance: High

Hi Lindsey,

As mentioned earlier, we're looking for your ADM's approval of the enclosed material - cover memo, plus TOR and proposed list of Task Team members.

Brian Leser and Courtney D'Aoust provided input for the list of potential members.

From: Patrick, Lindsey < Lindsey.Patrick@dfo-mpo.gc.ca>

Sent: June-18-19 10:53 AM

To: McGill, Stephanie < Stephanie. McGill@dfo-mpo.gc.ca>

Cc: Young, Susan <<u>Susan.Young@dfo-mpo.gc.ca</u>>; Iacovitti, Michelle <Michelle.lacovitti@dfo-mpo.gc.ca>; Raniere,

Benoit Robert < BenoitRobert.Raniere@dfo-mpo.gc.ca> Subject: RE: Head's up Atlantic Seal Task Team memo

Hi my entire management team – Sylvie, Adam and Whorley are at FMOC in Montreal. Can I get it electronically and send to them.

Lindsey

From: McGill, Stephanie < Stephanie.McGill@dfo-mpo.gc.ca>

Sent: Tuesday, June 18, 2019 10:16 AM

To: Patrick, Lindsey < Lindsey.Patrick@dfo-mpo.gc.ca > Cc: Young, Susan < Susan.Young@dfo-mpo.gc.ca > Subject: Head's up Atlantic Seal Task Team memo

Hi Lindsey,

Wanted to put on your radar that we will be seeking a fairly urgent signature on a docket this afternoon – it'll be a short memo to the Minister regarding the creation of the **Atlantic Seal Task Team** along with its Terms of Reference and list of potential participants. We have (or will be) consulting with Adam Burns/David Whorley for those names, so wanted to ensure that Sylvie has the opportunity to sign off.

I'll call when the docket is ready for sign-off and will walk it up to you.

Cheers, and have a great day! S.

Stephanie McGill
Senior Advisor – Conseillère principale
Assistant Deputy Minister's Office, Ecosystems and Oceans Science
Bureau de la sous-ministre adjointe, Sciences des écosystèmes et des océans
Fisheries and Oceans Canada – Pêches et Océans Canada
200 Kent Street, Ottawa ON K1A 0E6
Stephanie.McGill@dfo-mpo.gc.ca

\$\frac{1}{2}\$ 613-991-1313

Pages 227 to / à 228

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pages 217 to / à 218

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Potential List of Task Team Members

s.19(1)





Fisheries and Oceans

Pêches et Océans

Canada

Canada

Deputy Minister

Sous-ministre

s.21(1)(a) s.21(1)(b)

> CLASSIFICATION 2019-007-00483 EKME #: 4064535

MEMORANDUM FOR THE MINISTER

ATLANTIC SEAL TASK TEAM (FOR INFORMATION)

SUMMARY OF ADVICE TO MINISTER

The purpose of this note is to provide you with a proposed path forward for the establishment of an Atlantic Seal Task Team to obtain additional fishing industry and stakeholder input on Fisheries and Oceans Canada's (DFO) science activities pertaining to Atlantic seals, in particular as it relates to seal diet and predation on commercial fish stocks.

The Task Team would provide input on the DFO Atlantic seal science program, inform future science activities, and discuss opportunities to increase the involvement of the fishing industry in science projects. Finally, the Task Team would provide advice on how DFO could better its communicate scientific findings to harvesters.

This Task Team would consist of no more than individuals with broad expertise and experience in Atlantic fisheries, drawn from the fishing industry and other stakeholder groups. The Task Team, established for a duration of one year,

The draft Terms of Reference (Tab 1) and a list of potential members (Tab 2) are attached.

Communication opportunities would occur throughout the process, starting with the announcement of the intent to form the Task Team.

Timothy Sargent
Deputy Minister

Kevin Stringer Associate Deputy Minister

Attachments: 1) Draft Terms of Reference (4064418), 2) List of Potential Members (4064570)

Canadä

Fiche d'acheminement de correspondance Pêches et Océans Canada

CLASSIFICATION GCCMS #: 2019-007-00483 EKME #: 4064535

To: Pour:	Timothy Sargent		Date:		
Object: Objet:	ATLANTIC SEAL TAS	SK TEAM			
From / De:	Bernard Vigneault, DG	, Ecosystem	Science Directorate		
Via:	Arran McPherson, ADM, Ecosystems and Oceans Science				
Autre(s) Sylvie L	nal approvals: approbation(s): apointe isheries and hard Mana	 gement			
	Material for the Minister Documents pour le Min		Your Signature Votre signature	X	Information
Remark Remarc					
Distribu	tion:				
Drafting Rédacti	Officer/	Simon N	adeau (613-991-686	3)/ Simo	n Nadeau / KC

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Vigneault, Bernard

Subject: Location: TR: Atlantic Seal Task Team Debrief

Genevieve's office - 12W092

Start: End:

Tue 2019-06-25 9:30 AM Tue 2019-06-25 10:00 AM

Show Time As:

Tentative

Recurrence:

(none)

Meeting Status:

Not yet responded

Organizer:

Béchard, Geneviève

----Rendez-vous d'origine-----De: Béchard, Geneviève Envoyé: 24 juin 2019 11:34

À: Béchard, Geneviève; Vigneault, Bernard Objet: Atlantic Seal Task Team Debrief

Date: 25 juin 2019 09:30-10:00 (UTC-05:00) Est (É.-U. et Canada).

Où: Genevieve's office - 12W092

Hi Bernard,

Genevieve will be briefing the Minister on this memo this week (the meeting time and date has not been confirmed) and would like to be briefed by you prior to that meeting.

Thank you,

Angela Nantel

Administrative Assistant Fisheries and Oceans Canada/ Government of Canada Pêches et Océans Canada / Gouvernement du Canada 200 Kent Street Ottawa ON K1A 0E6 angela.nantel@dfo-mpo.gc.ca Tel: 613-991-1378





U 2019-007-00483 FW: Briefing on - DM Signed.p...

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Fisheries and Oceans Canada

Pêches et Océans Canada

Deputy Minister

Sous-ministre

<u>UNCLASSIFIED</u> 2019-007-00483 EKME #: 4064535

MEMORANDUM FOR THE MINISTER

(FOR INFORMATION)

SUMMARY OF ADVICE TO MINISTER

s.21(1)(a) s.21(1)(b) The purpose of this note is to provide you with a proposed path forward for the establishment of an Atlantic Seal Task Team to obtain additional fishing industry and stakeholder input on Fisheries and Oceans Canada's (DFO) science activities pertaining to Atlantic seals, in particular as it relates to seal diet and predation on commercial fish stocks.

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This Task Team would consist of no more than individuals with broad expertise and experience in Atlantic fisheries, drawn from the fishing industry and other stakeholder groups. The Task Team, established for a duration of one year,

The draft Terms of Reference (Tab 1) and a list of potential members (Tab 2) are attached.

Communication opportunities would occur throughout the process, starting with the announcement of the intent to form the Task Team.

Timothy Sargent Deputy Minister

JUN 2 1 2019

Kevin Stringer

Associate Deputy Minister

Attachments: 1) Draft Terms of Reference (#4064418), 2) List of Potential Members (#4064570)

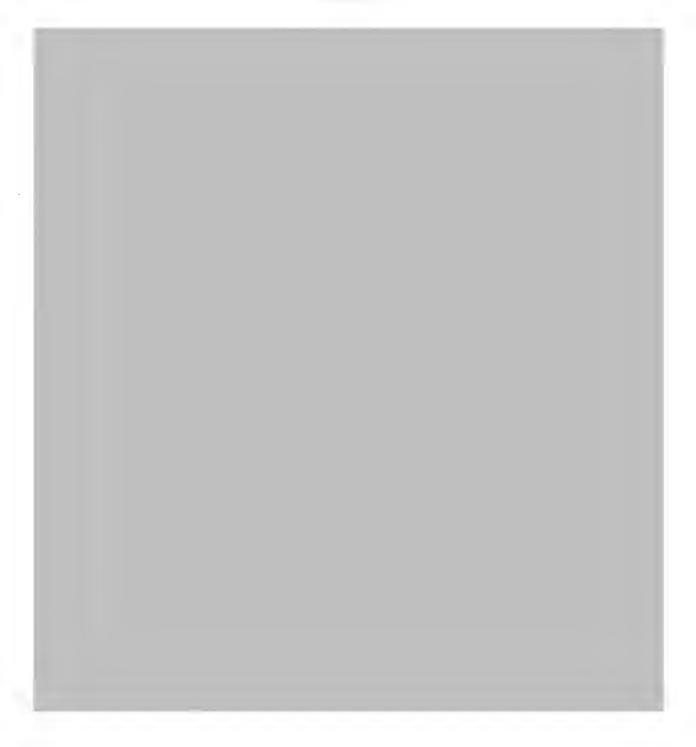


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s.21(1)(a) s.21(1)(b) Atlantic Seal Science Task Team

Terms of Reference

June 2019



Page 235 is withheld pursuant to sections est retenue en vertu des articles

21(1)(b), 21(1)(a)

Page 236
is a duplicate of
est un duplicata de la
page 229

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Vigneault, Bernard

From: Mok, Victoria

Sent: June 24, 2019 11:20 AM

To: Nantel, Angela **Subject:** FW: Briefing on seals

Attachments: U 2019-007-00483 - DM Signed.pdf

Good morning Angela,

As discussed at the Weekly Look Ahead – could you please schedule a 30 minute meeting for Bernard Vigneault to brief Geneviève on seals, preferably as soon as possible as the meeting may be on Thursday? Thank you!

Regards, Vicky

From: McGill, Stephanie < Stephanie. McGill@dfo-mpo.gc.ca>

Sent: Monday, June 24, 2019 11:14 AM

To: Mok, Victoria <Victoria.Mok@dfo-mpo.gc.ca>; Hodgins, Jill <Jill.Hodgins@dfo-mpo.gc.ca>

Subject: RE: Briefing on seals

We haven't seen the MINO Briefing schedule yet – the last I heard was that it could be Thursday. Attached is the docket.

From: Mok, Victoria < Victoria. Mok@dfo-mpo.gc.ca>

Sent: June-24-19 10:47 AM

To: Hodgins, Jill < Jill. Hodgins@dfo-mpo.gc.ca>

Cc: McGill, Stephanie <Stephanie.McGill@dfo-mpo.gc.ca>

Subject: Briefing on seals

Good morning Jill,

Is there a DM/MINO briefing on seals this week? Geneviève doesn't see it in her calendar and she would like a copy of the memo and to meet with Bernard/Wayne to get more info, thank you!

Regards, Vicky

Whorley, David

From:

Whorley, David

Sent:

Wednesday, July 3, 2019 10:16 AM

To:

D'Aoust, Courtney

Subject:

Fw: Ancmt of seals task force

Sent from my BlackBerry 10 smartphone on the Bell network.

Original Message

From: Ruecker, Kirsten < Kirsten.Ruecker@dfo-mpo.gc.ca>

Sent: Wednesday, July 3, 2019 10:09 AM

To: Lapointe, Sylvie; Burns, Adam; Whorley, David; Lester, Brian

Subject: FW: Ancmt of seals task force

----Original Message-----

From: Jarjour, Jasmine < Jasmine.Jarjour@dfo-mpo.gc.ca>

Sent: Wednesday, July 3, 2019 10:08 AM

To: McGill, Stephanie <Stephanie.McGill@dfo-mpo.gc.ca>; Ruecker, Kirsten <Kirsten.Ruecker@dfo-mpo.gc.ca>

Cc: Robinson, Connor < Connor. Robinson@dfo-mpo.gc.ca>

Subject: Ancmt of seals task force

Morning Steph & Kirsten!

Just a heads up that we are hearing this morning in Nfld MINO briefing that MINO would like to announce seals task force in Nfld early to mid August.

Jaz

Sent from my iPhone

Document Releat.
Information Act
de la Loi su: 1/2 1/2

Nadeau, Simon (NCR)

De:

Vigneault, Bernard

Envoyé: À: 8 juillet 2019 12:33 Nadeau, Simon (NCR)

Objet:

RE: Atlantic Seal Science Task Team Invitation letter_Draft_MG.docx

Catégories:

Important

s.19(1)

Simon,

Parfait. Merci beaucoup. C'est en fait Kevin Stringer. Je te reviens là-dessus,

Bernard

Bernard Vigneault, Ph.D.

Director General, Ecosystem Science, Ecosystems and Oceans Science, Fisheries and Oceans Canada / Government of Canada

Directeur général, sciences des écosystèmes, sciences des écosystèmes et des océans, pêches et océans Canada / Gouvernement du Canada

From: Nadeau, Simon (NCR) <Simon.Nadeau@dfo-mpo.gc.ca>

Sent: July 8, 2019 12:31 PM

To: Vigneault, Bernard < Bernard. Vigneault@dfo-mpo.gc.ca>

Subject: Atlantic Seal Science Task Team Invitation letter_Draft_MG.docx

Salut Bernard.

Ébauche de lettre d'invitation pour le Atlantic Seal Task Team.

Est-ce que c'est toi ou Arran qui allez informer/inviter

Simon

Pages 240 to / à 241 are withheld pursuant to sections sont retenues en vertu des articles

21(1)(b), 21(1)(a)

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Atlantic Seal Science Task Team

s.21(1)(a)
s.21(1)(b)

Draft Terms of Reference
July 2019

Page 243 is withheld pursuant to sections est retenue en vertu des articles

21(1)(b), 21(1)(a)

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Vigneault, Bernard

From:

McPherson, Arran

Sent:

July 9, 2019 12:27 PM

To:

Vigneault, Bernard

s.19(1) s.21(1)(a)

Subject:

Re: Seals ToR

s.21(1)(b)

Thanks! We can discuss when we meet tomorrow.

Sent from my BlackBerry 10 smartphone on the Bell network.

From: Vigneault, Bernard

Sent: Tuesday, July 9, 2019 12:25 PM

To: McPherson, Arran **Subject:** RE: Seals ToR

Arran,

Thanks a lot for reaching out to Sylvie regarding the proposed task team members. On our end, we have drafted the template for the invitation (see attached) and are updating the reference material for our research activities on Atlantic seals. Cheryl has mentioned that they are considering an announcement by Minister Wilkinson in NFL.

Bernard

Bernard Vigneault, Ph.D.

Director General, Ecosystem Science, Ecosystems and Oceans Science, Fisheries and Oceans Canada / Government of Canada

Directeur général, sciences des écosystèmes, sciences des écosystèmes et des océans, pêches et océans Canada / Gouvernement du Canada

From: McPherson, Arran < Arran. McPherson@dfo-mpo.gc.ca>

Sent: July 9, 2019 12:09 PM

To: Lapointe, Sylvie <Sylvie.Lapointe@dfo-mpo.gc.ca>

Cc: Burns, Adam <Adam.Burns@dfo-mpo.gc.ca>; Vigneault, Bernard <Bernard.Vigneault@dfo-mpo.gc.ca>

Subject: FW: Seals ToR

Hi Sylvie, it looks like we need to land on these names sometime tomorrow so we can get DM/MINO endorsement You will see that RDGs have made some comments for consideration. Could I ask that

you and your team take a look?

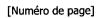
Could you folks consider and get back to us sometime tomorrow? Thanks, Arran

The many of the company of the compa	, 2019 – Poter	ntial List of Task Team Members
Name		Position / Affiliation

Page 245 is withheld pursuant to sections est retenue en vertu des articles

21(1)(b), 19(1), 21(1)(a)

Nadeau, Simon (NCR)		
De: Envoyé: À: Cc: Objet: Pièces jointes:	McPherson, Arran 15 juillet 2019 09:42 Vigneault, Bernard Nadeau, Simon (NCR) FW: Follow up from our call - Seal Science Task Group Seal Science Task Group july 15.docx	s.19(1) s.21(1)(b)
Catégories:	Important	
Hi there, this is where the seal to	ask group currently stands. Many thanks, Arran	
From: McPherson, Arran Sent: Monday, July 15, 2019 9:29	Q ANA	
To: Subject: RE: Follow up from our		
Hi		
Many thanks, Arran		
From: Sent: Monday, July 15, 2019 8:5 To: McPherson, Arran < Arran.M Subject: Follow up from our call Hi Arran,	cPherson@dfo-mpo.gc.ca>	
Thanks for the call last week.		
rimins for the call last week.		



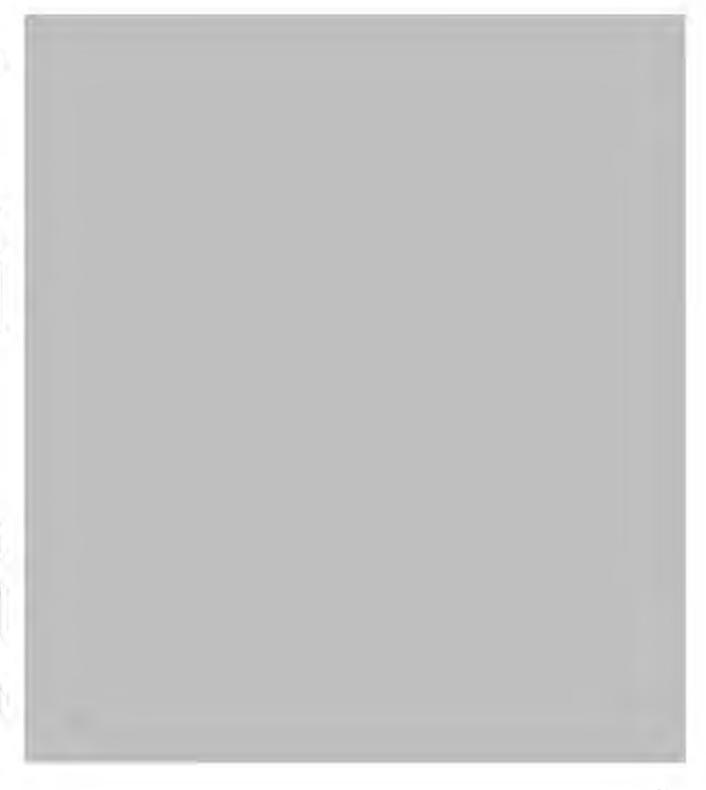
Regards,

s.19(1)

s.21(1)(b)

s.21(1)(b)

Atlantic Seal Science Task Team Terms of Reference June 2019



Page 249 is withheld pursuant to section est retenue en vertu de l'article

21(1)(b)

Vigneault, Bernard

From:

Vigneault, Bernard

Sent: To: July 22, 2019 9:41 PM Nadeau, Simon (NCR)

Subject:

Re: Follow up from our call - Seal Science Task Group

Merci!

s.21(1)(b)

Bernard Vigneault, Ph.D.

Director General, Ecosystem Science, Ecosystems and Oceans Science, Fisheries and Oceans Canada / Government of Canada

Directeur général, sciences des écosystèmes, sciences des écosystèmes et des océans, pêches et océans Cana da / Gouvernement du Canada

From: Nadeau, Simon (NCR)

Sent: Monday, July 22, 2019 9:38 PM

To: Vigneault, Bernard

Cc: Goit, Monique; Crawford, Kassandra; Ramirez Sanchez, Saudiel **Subject:** TR: Follow up from our call - Seal Science Task Group

Bernard, here is the new draft of the invitation letter to the Atlantic seal task team. Merci Monique!

Simon Nadeau

Director/Directeur

Marine Mammals Science/Science des mammifères marins

Ecosystem Science Directorate/Direction de la science des écosystèmes

Science Sector/Secteur des sciences

Fisheries and Oceans Canada/Pêches et Océans Canada

Tel: 613-991-6863 Cell: 613-240-7726

De: Goit, Monique < Monique. Goit@dfo-mpo.gc.ca>

Envoyé: 22 juillet 2019 16:57

A: Nadeau, Simon (NCR) <Simon.Nadeau@dfo-mpo.gc.ca>

Cc: Charron, Gizanne < Gizanne.Charron@dfo-mpo.gc.ca>; Crawford, Kassandra < Kassandra.Crawford@dfo-mpo.gc.ca>

Objet: FW: Follow up from our call - Seal Science Task Group

Importance: Haute

Salut Simon,

Attached is the revised invitation letter for the Atlantic Seal Task Team

Monique

From: Nadeau, Simon (NCR) < Simon.Nadeau@dfo-mpo.gc.ca>

Sent: Wednesday, July 17, 2019 9:55 AM

To: Goit, Monique < Monique.Goit@dfo-mpo.gc.ca >

Cc: Charron, Gizanne < Gizanne. Charron@dfo-mpo.gc.ca >; Crawford, Kassandra < Kassandra. Crawford@dfo-mpo.gc.ca >

Subject: RE: Follow up from our call - Seal Science Task Group

Monique,

Il faut mettre la lettre d'invitation à jour à partir de la version envoyée à Bernard le 8 juillet en tenant compte des changements faits par Arran aux TORs

Pour la fin de la journée demain si possible.

s.21(1)(b)

Merci

Simon Nadeau

Director/Directeur

Marine Mammals Science/Science des mammifères marins Ecosystem Science Directorate/Direction de la science des écosystèmes Science Sector/Secteur des sciences

Fisheries and Oceans Canada/Pêches et Océans Canada

Tel: 613-991-6863 Cell: 613-240-7726

De: Nadeau, Simon (NCR) Envoyé: 15 juillet 2019 11:41

À: Vigneault, Bernard <Bernard.Vigneault@dfo-mpo.gc.ca>

Cc: Charron, Gizanne < Gizanne. Charron@dfo-mpo.gc.ca >; Crawford, Kassandra < Kassandra. Crawford@dfo-mpo.gc.ca >;

Goit, Monique < Monique.Goit@dfo-mpo.gc.ca >

Objet: RE: Follow up from our call - Seal Science Task Group

Salut Bernard. On peut faire une nouvelle version de la lettre.

Avais-tu fait des changements à celle qu'on t'avait envoyée, ou Arran t'avait-elle demandé d'en faire?

Merci

Simon Nadeau

Director/Directeur

Marine Mammals Science/Science des mammifères marins Ecosystem Science Directorate/Direction de la science des écosystèmes Science Sector/Secteur des sciences

Fisheries and Oceans Canada/Pêches et Océans Canada

Tel: 613-991-6863 Cell: 613-240-7726

De: McPherson, Arran < Arran.McPherson@dfo-mpo.gc.ca>

Envoyé : 15 juillet 2019 09:42

À: Vigneault, Bernard < Bernard.Vigneault@dfo-mpo.gc.ca > Cc: Nadeau, Simon (NCR) < Simon.Nadeau@dfo-mpo.gc.ca > Objet: FW: Follow up from our call - Seal Science Task Group

Hi there, this is where the seal task group currently stands.

Many thanks, Arran

Sent: Monday, July 15, 2019 9:29 AM To:		
Subject: RE: Follow up from our call - Seal Science Task Group		
Hi		
Many thanks, Arran From: Sent: Monday, July 15, 2019 8:59 AM To: McPherson, Arran < Arran.McPherson@dfo-mpo.gc.ca > Subject: Follow up from our call - Seal Science Task Group	s.19(1) s.21(1)(b)	
Hi Arran,		
Thanks for the call last week.		
Regards,		

From: McPherson, Arran

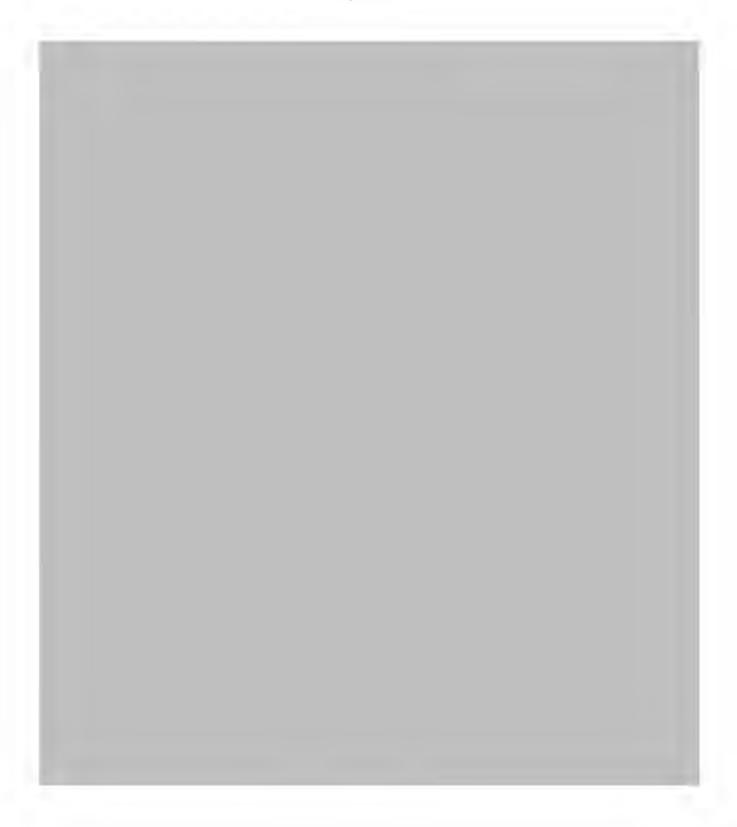
Pages 253 to / à 254 are withheld pursuant to sections sont retenues en vertu des articles

21(1)(b), 21(1)(a)

Atlantic Seal Science Task Team Terms of Reference

July 2019

s.21(1)(a) s.21(1)(b)



Page 256 is withheld pursuant to sections est retenue en vertu des articles

21(1)(b), 21(1)(a)

of the Access to Information Act de la Loi sur l'accès à l'information

Pages 257 to / à 258
are duplicates of
sont des duplicatas des
pages 248 to / à 249

Whorley, David		
From: Sent: Subject: shared all of the na	Whorley, David Wednesday, July 31, 2019 3:57 PM Lapointe, Sylvie RE: ames with her late yesterday.	s.19(1) s.21(1)(b)
Dave	·	
Sent: Wednesday, J Fo: Whorley, David Subject: Re:	vie <sylvie.lapointe@dfo-mpo.gc.ca> luly 31, 2019 2:09 PM <david.whorley@dfo-mpo.gc.ca></david.whorley@dfo-mpo.gc.ca></sylvie.lapointe@dfo-mpo.gc.ca>	,
We should share	name as well.	
	5:19 PM, Lapointe, Sylvie < <u>Sylvie.Lapointe@dfo-m</u>	po.gc.ca> wrote:
Thx - please	e go ahead and share these names with Arran.	
Sylvie		
On Jul 30, 2	2019, at 5:01 PM, Whorley, David < <u>David.Whorley</u>	@dfo-mpo.gc.ca> wrote:
Hi S	Sylvie –	
Jus	t getting back to you on this.	
Jus	t some thoughts.	

From: D'Aoust, Courtney < Courtney. D'aoust@dfo-mpo.gc.ca >

Sent: Tuesday, July 30, 2019 10:45 AM

Dave

To: Whorley, David < <u>David.Whorley@dfo-mpo.gc.ca</u>>
Subject:

s.19(1)
s.21(1)(b)

Hi Dave, as requested:

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Whorley, David

From:

Whorley, David

Sent:

Wednesday, July 31, 2019 4:20 PM

To:

Lapointe, Sylvie

Subject:

FW:

s.19(1) s.21(1)(b)

I went back to look. Yes, I sent his name to her. Highlighted below

From: McPherson, Arran < Arran. McPherson@dfo-mpo.gc.ca>

Sent: Tuesday, July 30, 2019 8:42 PM

To: Whorley, David < David. Whorley@dfo-mpo.gc.ca>

Subject: Re:

Thanks!

Sent from my BlackBerry 10 smartphone on the Bell network.

From: Whorley, David

Sent: Tuesday, July 30, 2019 6:38 PM

To: McPherson, Arran

Subject: Fw:

Some thoughts for members.

Sent from my BlackBerry 10 smartphone on the Bell network.

From: Lapointe, Sylvie < Sylvie.Lapointe@dfo-mpo.gc.ca >

Sent: Tuesday, July 30, 2019 5:19 PM

To: Whorley, David Subject: Re:

Thx - please go ahead and share these names with Arran.

Sylvie

On Jul 30, 2019, at 5:01 PM, Whorley, David < <u>David.Whorley@dfo-mpo.gc.ca</u>> wrote:

Hi Sylvie -

Just getting back to you on this.

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

Just some thoughts.

Dave

s.19(1) s.21(1)(b)

From: D'Aoust, Courtney < Courtney. D'aoust@dfo-mpo.gc.ca >

Sent: Tuesday, July 30, 2019 10:45 AM

To: Whorley, David < David. Whorley@dfo-mpo.gc.ca >

Subject:

Hi Dave, as requested:	
·	

Vigneault, Bernard

From:

McPherson, Arran

Sent:

August 1, 2019 4:36 PM

To:

Lapointe, Sylvie; Northcott, Jennifer; Vigneault, Bernard; Béchard, Geneviève

Subject:

FW: Follow up from our call - Seal Science Task Group

Attachments:

Seal Science Task Group july 15.docx

Hi everyone, I wanted you all to have the most recent version of the Seal Task Team ToR.

Arran.

s.21(1)(b)

Pages 264 to / à 265 are duplicates of sont des duplicatas des pages 248 to / à 249

Whorley, David		
From: Sent: To: Subject:	Whorley, David Thursday, August 1, 2019 7:18 PM McPherson, Arran Re:	s.19(1) s.21(1)(b)
I was thinking about tha	et later yesterday. e take another run at some names for you tomorr	·ow
Dave		
Sent from my BlackBerr	y 10 smartphone on the Bell network.	
From: McPherson, Arran Sent: Thursday, August 1 To: Whorley, David Subject: RE:	., 2019 2:28 PM	
Hi Dave, sorry, I missed th	is somehow in my emails. I just wanted to make sure t	these were the names you wanted
	Arran	
From: Whorley, David Sent: Tuesday, July 30, 20 To: McPherson, Arran <ar fw:<="" subject:="" td=""><td>19 6:38 PM ran.McPherson@dfo-mpo.gc.ca></td><td></td></ar>	19 6:38 PM ran.McPherson@dfo-mpo.gc.ca>	
Some thoughts for member	ers.	
Sent from my BlackBerry	10 smartphone on the Bell network.	
From: Lapointe, Sylvie < Sent: Tuesday, July 30, 2 To: Whorley, David Subject: Re:	Sylvie.Lapointe@dfo-mpo.gc.ca> 2019 5:19 PM	
Thx - please go ahead and	share these names with Arran.	
Sylvie	-	
On Jul 30, 2019, at 5:01 Pl	M, Whorley, David < <u>David.Whorley@dfo-mpo.gc.ca</u> > v	vrote:
Hi Sylvie –		
Just getting back t	o you on this.	

	MATCHIKA IIRU WA II ORUA II BIKARUKO KOKIKA III BILIKWA II II
ust some thoughts.	
	s.19(1)
	s.21(1)(b)
ave	((-)(-)
rom: D'Aoust, Courtney < Courtney. D'aoust@dfo-mpo.gc.ca>	
ent: Tuesday, July 30, 2019 10:45 AM	
o: Whorley, David < <u>David.Whorley@dfo-mpo.gc.ca</u> >	
ubject:	
li Dave, as requested:	

Rivierre, Antoine

names).

De: Envoyé: À:	Rivierre, Antoine 9 août 2019 15:00 Lemelin, Dario	- 40(4)
Cc:	Lester, Brian	s.19(1)
Objet:	RE: FOLLOW UPSEALS WORKING GROUP	s.21(1)(b)
Dario, Dans son message plus bas, je po	ense que Brian parle de	
Merci		
De: Lemelin, Dario < Dario.Leme Envoyé: 9 août 2019 10:20 À: Rivierre, Antoine < Antoine.R	ivierre@dfo-mpo.gc.ca>	
Objet : TR: FOLLOW UPSEALS	WORKING GROUP	
Antoine,		
Pour discussion		
Dario		
<pre><dario.lemelin@dfo-mpo.gc.ca< pre=""></dario.lemelin@dfo-mpo.gc.ca<></pre>	er@dfo-mpo.gc.ca>; Lapierre, Daniel < <u>Daniel</u> >; Doherty, Penny < <u>Penny.Doherty@dfo-mpo</u> dfo-mpo.gc.ca>; Gaudet, Mario < <u>Mario.Gaud</u>	o.gc.ca>
Hi guys,		
interest in being part of a seals v	ne below email chain, to see if you guys would working group? My seals counterpart here in it would be a good idea to see if you guys kno	NHQ, Courtney, has already put forward ow of anyone else
believe for now we are putting s	suggestions forward, nothing past that (i.e. do	to participate in the working group. I not need to reach out to your suggested

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	minimanon von crooninem anandre ei
I have pasted below an excerpt from the DRAFT terms o would be asked of the names you may suggest:	de la Loi sur l'accès à l'information of reference for the working group, to give you context of what
I believe this is due today, so think It over and let me kn may be a good fit/interested to participate – by 2pm Ot	ow if you have a NIL response, or some proposed names who tawa time?
	s.19(1)
Thanks,	s.21(1)(b)
Lauren	
From: Lester, Brian < Brian.Lester@dfo-mpo.gc.ca >	, I that willing the entry to the first the Property of Market Control of the first
Sent: 2019–August-06 10:11 AM	
To: D'Aoust, Courtney < Courtney. D'aoust@dfo-mpo.gc.	.ca>; Bottke, Lauren < <u>Lauren.Bottke@dfo-mpo.gc.ca</u> >
Cc: Edgar, Leigh < Leigh. Edgar@dfo-mpo.gc.ca >	
Subject: Re: FOLLOW UPSEALS WORKING GROUP	
Hey Courtney/Lauren: See below. I was thinking we sho	ould solicit regions and get a mix of people
Thinking maybe off the top of my head of:	
Thinking maybe on the top of my nead on	
	16.1 L
Could you check with your regional counterparts and se	ee if they agree or have another name to put forward.
Unfortunately we need to provide today.	
Thanks	
В	
Control Plant Para 10 area tabana an the Poll ne	A o els
Sent from my BlackBerry 10 smartphone on the Bell ne	twork.
From: Whorley, David	
Sent: Tuesday, August 6, 2019 9:01 AM To: Lester, Brian; D'Aoust, Courtney	
Subject: FOLLOW UP SEALS WORKING GROUP	
Hi Brian and Courtney	
NA/a magnided manage to Arrest for neutrinostics in the co	al working group. We listed some helpful
We provided names to Arran for participation in the se though as Arran points out,	ai working group. We iisted some neipidi
Chough as Arrain points out	

I think that this opens up the possibility of getting more participation

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Brian: can you please turn your mind to this, and send Arran something like a 4 to a half-dozen possible candidate
If you could send that to her today, that would be great.
Thanks s.19(1)
s.21(1)(b)
Dave
From: McPherson, Arran < Arran.McPherson@dfo-mpo.gc.ca >
Sent: Thursday, August 1, 2019 2:29 PM To: Whorley, David < David. Whorley@dfo-mpo.gc.ca >
Subject: RE:
Hi Dave, sorry, I missed this somehow in my emails. I just wanted to make sure these were the names you wanted
Arran
From: Whorley, David
Sent: Tuesday, July 30, 2019 6:38 PM
To: McPherson, Arran < Arran.McPherson@dfo-mpo.gc.ca > Subject: Fw:
Some thoughts for members.
Sent from my BlackBerry 10 smartphone on the Bell network.
From: Lapointe, Sylvie < <u>Sylvie.Lapointe@dfo-mpo.gc.ca</u> > Sent: Tuesday, July 30, 2019 5:19 PM
To: Whorley, David Subject: Re:
Thx - please go ahead and share these names with Arran.
Sylvie
On Jul 30, 2019, at 5:01 PM, Whorley, David < <u>David.Whorley@dfo-mpo.gc.ca</u> > wrote:
Hi Sylvie –
Just getting back to you on this.

Document Released Under the Access to Information Act / Document divulgué en vertude la Loi sur l'accès à l'information.

Just some thoughts.	
Dave	s.19(1) s.21(1)(b)
From: D'Aoust, Courtney < Courtney.D'aoust@dfo-mpo.gc.ca > Sent: Tuesday, July 30, 2019 10:45 AM To: Whorley, David < David.Whorley@dfo-mpo.gc.ca > Subject:	
Hi Dave, as requested:	

Document Released Under the Access to Information Act / Document divulgué en vertude la Loi sur l'accès à l'information.

Whorley, David

From:

McPherson, Arran

Sent:

Tuesday, August 20, 2019 2:58 PM

To:

Doucet, Serge; Quinn, Frank; Perry, Jacqueline; Vincent, Patrick; Wentzell, Doug;

Lapointe, Sylvie

Cc:

Vigneault, Bernard; Nadeau, Simon (NCR); Robinson, Connor; Whorley, David; McGill,

Stephanie

Subject:

Confidential - Seal Task Team Update

s.19(1)

Importance:

High

s.21(1)(b)

Colleagues, I wanted to touch base with you all on the status of the Seal Task Team that was announced by the Minister last week.

As was referenced in the Minister's speech and subsequent press release, the Department expects to finalize Task Team members in the next several weeks.

To that end, if anyone is in touch with you to signal a specific interest, please let me know.

In the meantime, we are working to put together a new version of a "short-list" for consideration.

I am circling back to you for feedback. The intent is to have members of Some names that have been raised are below. Please let me know if you have any specific concerns with any of the list or would like to add someone

Many thanks, Arran.

for consideration.

industry or industry representatives

